MISSOURI DEPARTMENT OF NATURAL RESOURCES

AIR PROGRAM REVIEW

Final Report

February, 2001

Conducted by the

U. S. Environmental Protection Agency

Region 7

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Kansas City, Kansas 66101

TABLE OF CONTENTS

Chapter I

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Introduction

The Executive Summary summarizes the results of the EPA's review of the Missouri Air Pollution Control Program (APCP) conducted in July 2000. This summary and the report are divided into five chapters: Planning, Permitting, Compliance and Enforcement, Asbestos, and Monitoring.

Planning

This section of the review covers regulatory development, emissions inventory, grants and work plan management, regional and local agency coordination, training, modeling, and the small business assistance program.

Regulatory Development - The APCP has a very involved and lengthy rulemaking process, which requires significant staff resources to support. The Planning Section has developed a Rulemaking Manual which provides all necessary information for a rule writer to successfully draft, propose, and finalize a new or revised rule, as well as to submit it to the EPA for State Implementation Plan (SIP) approval. Since the development of this manual about five years ago, there has been a significant improvement in the quality and timeliness of rule actions and SIP submittals.

The rule process has a number of state statutory and administrative time lines which must be met for a rule to be successfully adopted by the Missouri Air Conservation Commission (MACC). Generally, a rule requires a minimum of ten months to get through the system. The APCP staff have very little ability to minimize this time frame. Given the very large number of rulemaking actions each year and the involved and complicated process, the Planning Section staff are to be highly commended for their efforts in this area.

Emission Inventory - The APCP conducts an extensive emission inventory each year. The staff timely submit the information to the national data system. However, two critical problem areas were identified which need to be addressed. The information collected from industry does not distinguish emission release point types (such as stacks versus fugitive emissions.) Thus, not all data fields in the national data base could be completed. Secondly, facilities are permitted to withhold certain process description codes as trade secret. No other state protects this particular information. Thus, these two deficiencies result in

the Missouri source information in the national database being incomplete. The emission inventory forms should be revised appropriately to require all necessary information.

The new state system, MoEIS, is exceptional. The final product will be powerful and should help reduce the workload of staff and minimize data entry errors. Sources are expected to be able to enter information directly into the system via the World Wide Web (WWW) by the summer of 2002. The staff are gaining valuable expertise by conducting the first toxic nonpoint source inventory in the region in connection with the St. Louis Community Air Project. Additional expertise has been developed as a result of the NO_x SIP call. With the exceptions noted above, the Emission Inventory Unit does an excellent job conducting and maintaining the annual emissions inventory, and is to be commended for planning for the future by implementing the MoEIS and utilizing the WWW capabilities.

Grants and Work Plan Management - The MDNR and APCP have a well-defined process for establishing environmental goals and priorities and for identifying objective measures and outputs which lead to strategies and work plan commitments. The MDNR and EPA staff work together to identify mutual environmental goals which are incorporated into the Performance Partnership Agreement. The Administration Section accurately tracks funding mechanisms and accounts for charges to Title V and Federal grant accounts.

Regional and Local Agency Coordination - The APCP effectively coordinates and communicates with the regional and local agency offices through the use of an annual work plan agreement, by providing training opportunities, by monthly and quarterly calls and meetings, and by conducting program audits. These agencies in turn support the mission of the APCP by being the primary contact of the MDNR with the public, and by conducting inspections and responding to citizen complaints. The relationship between the “headquarters” and “field” offices seems to be symbiotic and mutually beneficial.

Training - The APCP includes in its staff budget an amount for individual staff training each year. Each staff member has a training plan in his/her performance appraisal planning document. Training funded with Federal grant dollars is reported to the EPA in the annual work plan report. The APCP provides training for the regional and local agency staff and makes presentations at Region 7 training activities when requested to do so.

Modeling - The modeling program staff is very experienced and competent in running traditional and regional air dispersion

models. The modeling staff participate in modeling for construction permitting when the SCREEN3 model or nomogram indicate more refined modeling is necessary. It is recommended that a background value be added when doing screening modeling, and that increment analysis be considered when performing modeling for minor sources as well as PSD sources.

Small Business Assistance Program - The state administers a very effective program. By maintaining three offices and holding regular meetings and offering a variety of outreach activities, small businesses are provided a wealth of compliance assistance. The Technical Assistance Program is particularly effective in fulfilling its responsibilities.

Permitting

Overall, the APCP is running a very competent permitting program. The department is fortunate to have several staff with many years of experience and knowledge in the air program. Staff turnover is an ongoing problem, with new staff frequently leaving for the private sector after gaining a few years' experience. At the time of this review there were 9 vacancies in the Permitting Section out of a total of 30 positions. The program is using contractors to fill the gap, but we recommend that the cause for staff turnover, primarily uncompetitive salaries, be addressed if at all possible.

As was evident from our interviews and file review, the staff are knowledgeable about the air program and generally make conservative decisions. Screening modeling for minor sources and toxics reviews are indicative of the program's desire to protect public health.

The program is to be commended for the preparation of the construction permit fact sheets, for the development of a searchable database for all construction and operating permits issued by the program, the development of mass-balance based forms for compliance tracking with long-term emission caps, and for the use of its internal permit tracking system. It is evident that procedures and practices are in place to incorporate past construction permits into Title V operating permits.

We recommend that, in order to reduce the number of sources constructing without a permit (i.e., "as-built projects"), additional outreach and education be extended to the regulated community with regard to permitting requirements. We encourage the program to make its permit forms, instructions, and guidance available on the Web.

We recommend that sources be required to provide more accurate emissions information on permit applications, that applicability of NSPS-NESHAP-MACT be more closely scrutinized, that sources be required to fully justify the need for a 12-month averaging time, and that care be taken to ensure that permit application conditions are incorporated into the final permit. Any assumptions used to limit potential to emit or otherwise limit source operations should also be explicitly included in the permit.

Compliance and Enforcement

The Compliance Section and the regional offices are to be commended for the inspection and enforcement activity conducted each year, with over 1600 inspections and numerous enforcement actions of various types completed annually. Serious violations are nearly always addressed by an enforcement action, be it a notice of violation (NOV) or a penalty action. There is good coordination and communication between the regional offices, which conduct the inspections, and the Compliance Section, which receives the inspection reports and takes follow-up enforcement action. The regional offices are very timely in responding to complaints.

When violations are found, an NOV is issued and penalties are assessed if deemed appropriate by the Section Chief. The EPA recommends that a penalty policy be developed to establish consistency and ensure fairness when assessing penalties. The program does not hesitate to recommend to the MACC that a case be referred to the Attorney General if a reasonable settlement cannot be reached.

We recommend that the inspection forms be significantly revised to contain more specific source applicability requirements. The present generic forms make it difficult for an inspector to know what permitting requirements the source is subject to. We also recommend that the file documentation be improved to more completely reflect resolution of enforcement actions.

Finally, we recommend that all data necessary to meet the compliance national minimum data requirement guidelines, including high priority violation information, and follow-up compliance information, be directly inputted into AFS by the MDNR.

Asbestos

As a result of a court decision in February of 1998, Missouri's asbestos demolition/renovation rule was declared invalid, and could not be enforced. As a result, MDNR pursued minimal asbestos demo/reno enforcement during our program review period. Recently, however, MDNR has renewed its efforts to pursue penalties for violations of the federal asbestos NESHAP. The level of documentation in asbestos case files varies considerably. MDNR does not have a specific written penalty policy for asbestos violations. EPA recommends that MDNR develop an asbestos data system which is compatible with EPA's National Asbestos Registry System (NARS).

Monitoring

The MDNR and local agencies operate and maintain the largest air monitoring network in Region 7 with over 135 monitors at 55 sites. The air monitoring staff is to be commended for its expertise and dedication to maintaining a network which, with few exceptions, meets all data quality objectives. The program is unique in that it maintains an independent quality assurance capacity, which results in an exceptionally high level of valid data collection and accuracy. The program has established multiple fail-safe systems to protect the integrity of the ozone monitoring data, and uses an Internet link to download $PM_{2.5}$ data from the field monitors. The EPA does have several routine recommendations for improvement which are detailed in the Audit Report.

Chapter II

INTRODUCTION

TABLE OF CONTENTS

Section I

PURPOSE

Many governmental and non-governmental entities are responsible for ensuring environmental protection throughout the nation. The majority of environmental programs are carried out through the shared responsibility of the Environmental Protection Agency (EPA) and its non-Federal partners.

In Region 7, EPA has delegated a large share of its authority to the states. After delegation, EPA maintains responsibility for delegated programs and continues to be accountable for progress toward meeting national environmental goals and for ensuring that Federal statues are fulfilled. EPA is responsible to ensure the fair and equitable application and enforcement of Federal environmental laws, regulations, and standards, and to provide its partners with the necessary assistance, tools, methods, and back-up support to solve environmental problems.

In delegated programs, the goal of oversight is to strengthen the relationship between EPA and its partners to ensure that the national environmental goals expressed in the EPA Strategic Plan are attained. Effective oversight helps to ensure adequate environmental protection through continued development and enforcement of national standards and the use of direct enforcement action against polluters as necessary to reinforce the action and authority of EPA's partners. Oversight also helps to enhance a partner's capabilities to administer sound environmental protection programs through increased communication and a combination of support and evaluation activities. Finally, Federal oversight seeks to describe and analyze the status of national and regional environmental quality, through continued collection and distribution of information from governmental agencies and other major sources. EPA is fully committed to the success of its partners' environmental programs. A clear expectation for program performance is a crucial factor in achieving an effective partnership.

Fostering quality delegated programs is not a static activity, and will vary across the different delegated entities. Conditions change, and program activities must change to respond to new environmental problems and challenges. Consequently, the methods used to oversee delegated programs must change over time, depending on the maturity and complexity of national programs and on the capability of EPA's delegated partners.

Section II

PROCESS

The 1984 “EPA Policy on Oversight of Delegated Environmental Programs” provides the foundation for structuring a Program Review. Starting with this policy, EPA Region 7 staff developed a *Program Review Protocol* document, which provides the justification and framework for conducting program reviews in the Air, RCRA, and Toxics Division (ARTD) of Region 7.

The protocol establishes a minimum frequency for conducting program reviews within the division, defines the scope of full and partial reviews within each program, and provides a consistent basis for determining which type of review is appropriate. The protocol also provides a way to document the rationale for determining whether or not any program review effort is needed in a particular program. In addition, the protocol includes a summary of the regulatory requirements for the major programs within the ARTD, a discussion of oversight policy, and a differentiation between the requirements of grant close-out reviews and program reviews.

The ARTD staff subsequently issued a second document, *Operating Principles for Conducting Program Reviews*. This is primarily an internal planning document which lays out the process for providing consistent internal procedures for Program Reviews.

Finally, EPA staff developed the *Program Review Criteria Notebook*, which was used as the basis for the Missouri Air Program review. This notebook contains the criteria and checklist for each of the program areas, i.e., modeling, monitoring, permitting, enforcement, etc., being reviewed. This notebook was provided to all of Region 7's state partners in January, 2000.

The ARTD staff has previously conducted partial program reviews in other Region 7 states. For example, the New Source Rreview and Title V permitting programs have been reviewed in three states, and the air permitting and compliance programs have been reviewed in two states. Two local agency programs have also been reviewed.

As stated in the Program Review Protocol, it is Region 7's goal to conduct a program review of each state once every four years. The Missouri Department of Natural Resources (MDNR) Air Pollution Control Program (APCP) director consented to be the

first Region 7 state to be subject to this comprehensive review, which covers all aspects of the MDNR air program.

Section III

PROCEDURE

The EPA team leader for the Program Review coordinated with the MDNR primary contact person in March, 2000, to select a mutually agreeable date for the review. Considerable lead time was necessary considering the number of staff involved in both agencies. The week of July 10, 2000 was selected as the time for the on-site visit by EPA staff. In early May, 2000, EPA provided the MDNR a 'kick-off' letter (see Appendix) which contained a detailed schedule for the week of July 10, provided certain checklist information, and listed a schedule for completion of the draft and final reports. As stated in the *Operating Principles* document, EPA's goal is to provide the state a final report within 90 days of completion of the on-site review.

EPA staff initiated the on-site review by conducting an Entrance Conference (see Appendix - Attendees List). This meeting provided the opportunity for EPA to discuss its schedule for the week, identified MDNR staff EPA needed to interview, provided the state staff the opportunity to present preliminary questions to EPA, covered the use of APCP facilities and equipment, and set a time for the Exit Conference.

EPA staff was on-site for three full days. The Exit Conference consisted of EPA staff providing a verbal summary of their results. APCP staff provided additional information as necessary for clarification, as well as a few summary closing remarks (see Appendix - Attendees List).

EPA staff received the full cooperation and assistance of the APCP staff throughout the on-site visit. Supervisors and individual staff members made themselves available as necessary to answer questions or to otherwise assist the EPA staff. EPA fully appreciates this assistance and spirit of cooperation. At both the entrance and exit conferences the APCP staff made the point that their goal was to provide the highest level of environmental protection to the resources and citizens of Missouri, and that any recommendations that EPA might have as a result of the program review would be welcomed.

APPENDIX - Introduction

EPA Kick-Off Letter, May 1, 2000

Kick-Off Meeting Attendees List

Exit Conference Attendees List

Chapter III

PLANNING

TABLE OF CONTENTS

Section 1

INTRODUCTION

The areas of review in this chapter include;

- Regulatory Development
- Emission Inventory
- Grant and Work plan Management
- Regional Office and Local Agency Coordination
- Training
- Modeling
- Small Business Assistance Program

EPA specialists in the emission inventory, modeling, and asbestos programs interviewed the respective MDNR program specialists at their offices in Jefferson City. The Small Business Assistance Program information was gathered through telephone interview. The remaining information was gathered during the on-site visit by the EPA APDB Missouri coordinator during interviews with the MDNR's Air Pollution Control Program's Planning Section (PS) Chief and staff, and the Administration Section Chief.

The organizational structure of the MDNR air program is;

Missouri Department of Natural Resources
Division of Environmental Quality
Air Pollution Control Program
Planning Section
Permits Section
Enforcement Section
Technical Support Section
Administration Section

The PS is one of five sections under the office of the Air Pollution Control Program (APCP) director. There are presently 21 positions assigned to this section; three clerical, six in the Inspection/Maintenance (I/M) Unit, and 12 in the Rules/State Implementation Plan (SIP) Development Unit. At the time of this review, there were two vacancies in the I/M Unit, and one in the Planning Unit. A personnel/organization chart is shown in the

Appendix.

In addition to the Headquarters staff in Jefferson City, there are six regional offices geographically dispersed throughout the state. These offices do not participate substantially in the PS planning activities, but primarily respond to citizens complaints and conduct inspections of air emission sources. A map showing the location of these offices is included in the Appendix. There are also four local agency air programs; located in St. Louis City, St. Louis County, Kansas City, and Springfield-Greene County. These programs have their own area-specific rules that supplement state rules applicable in their area.

The APCP does not itself adopt air pollution rules. This function is maintained by the Missouri Air Conservation Commission (MACC). The Commission consists of seven members, who are appointed by the Governor. Each member's term is for four years, but they may be reappointed. The MACC conducts public hearings and takes testimony on proposed rulemakings. After a public period has been provided and the rule is finalized, the PS staff presents the final rulemaking to the MACC and the MACC votes whether to adopt it.

The MACC conducts at least nine monthly meetings a year. A list of the current MACC members is included in the Appendix.

APPENDIX - Introduction

Personnel/Organization Chart

Regional and Satellite Offices Map

Missouri Air Conservation Commission Members List

Section II

REGULATORY DEVELOPMENT

The PS is responsible for rule development and SIP submittals to EPA. The air program is continuously developing new rules or revising existing rules. Over the past several years, many new rules have been developed and adopted to address the ozone nonattainment problem in St. Louis, for example, and routine rule revisions are necessary to adopt ongoing federal requirements. The PS has also undertaken the project of rescinding local agency rules from the SIP, where possible, and replacing them with more current state-wide rules. It is estimated that the PS managed nearly 50 rule development/revision packages within the past two years. The PS also develops and manages numerous source/project specific SIP submittals such as the lead SIPs and ozone nonattainment SIPs, and 111(d) plans.

The MDNR has a very involved and time consuming process with regards to rule development and implementation. The PS has developed a very thorough Rulemaking Manual which contains information to be used by the section rule writers in writing the rules and moving them through the administrative process. A copy of this 500 page manual is available at the APDB office for review.

Since this manual was developed about five years ago, the quality and timeliness of rule development and SIP submittals has improved significantly. The manual contains form letters, templates, flowcharts, checklists, and references. It includes rule author procedures and checklists, clerical procedures, and sample rule package examples. It also includes information on rule presentation to the MACC, and a section on SIP submittals. The following flowcharts and checklists are included in the Appendix of this section for reference;

- Rulemaking Timeline
- Rulemaking Process Flowchart
- Rule Author Project Checklist
- Air Quality Plans Development Flowchart
- State Air Quality Plans Reference Chart
- Planning Interfaces Chart

The PS is to be commended for the development of this document.

A review of the Rulemaking Timeline chart above shows several built-in time constraints which sometimes place the PS staff under difficult circumstance. For example, the staff usually has at most two weeks to finalize a rule after the close of the public comment period. This includes developing a response-to-comments document, a final rule, and submitting the necessary documents for the MACC meeting at which rule adoption will be voted on. Another critical time constraint is the requirement that, from the close of the public comment period until the filing of the final rule with the Secretary of State's office, must not exceed 90 days. In addition, the final rule must be submitted to the Joint Committee on Administrative Rules a mininum of 30 days prior to filing with the Secretary of State's office. If this filing date is missed, the rule cannot become effective, and the rule making process must be started over. Despite these hurdles the PS staff smoothly and successfully completes numerous rule making actions each year.

In order to track the progress of each rule as it goes through the rule making process the PS has developed a report titled, Rules In Progress Schedule. This schedule tracks 10 benchmarks as a rule moves through the rule making process. It contains both dates of completed actions and planned actions. This schedule has proved very helpful to EPA staff who must participate in the rule making process; for example, provide comments on a draft rule, or provide testimony at the public hearing for the rule.

A similar tracking form is maintained for source or project specific SIP actions. This report, State Air Quality Plans Status Report, is updated at least monthly, and helps track those SIP actions which do not necessarily involve rule making. The EPA staff finds this report very useful in tracking the status of the state's actions on these activities. A copy of both reports is included in the Appendix of this section.

The PS staff also expends considerable resources each month supporting the MACC. In addition to responding to Commission members' individual requests for information throughout the month, the staff provides planning reports, meeting agendas, meeting minute inputs and other special request information for inclusion in the monthly MACC briefing document. This document contains minutes from the previous meeting, monthly reports prepared by the Planning, Permits, and Enforcement Sections, documents for any rule making actions which may be before the Commission that month (either a public hearing on a draft rule,

or a vote for rule adoption), and other new business. This document generally is between 150-200 pages in length and is provided to the MACC and the public approximately 10 days before each MACC meeting. There are about 500 copies mailed each month to those on the MDNR's mailing list.

The APCP director and staff frequently provide briefings at the MACC meetings in order to keep the MACC Commissioners informed of high priority projects the staff is working on, projects that are of special interest to the public, and other relevant ongoing activities. The staff recently gave a presentation on the APCP rule making process. A copy of this presentation is included in the Appendix.

APPENDIX - Regulatory Development

Rule Making Manual Documents

- Rulemaking Timeline
- Rulemaking Process Flowchart
- Rule Author Project Checklist
- Air Quality Plans Development Flowchart
- State Air Quality Plans Reference Chart
- Planning Interfaces Chart

Rules in Progress Schedule

State Air Quality Plan Status Report

Rule Making Process Presentation

Section III

GRANT AND WORK PLAN MANAGEMENT

GRANT

The scope of this program review did not include a financial audit of the state's management of Federal funds received in support of its environmental programs. However, the Air Pollution Control Program's Administration Section chief was interviewed to gain an understanding how the MDNR accounts for the section 105 air grant funds it receives.

The MDNR operates under a Performance Partnership Agreement (PPA) and Performance Partnership Grant (PPG) with Region 7. Thus, the air program section 105 air grant funds are awarded as part of the PPG. However, the MDNR tracks, through the use of unique budget codes, expenses charged against its section 105 grant allocation. The MDNR also, at times, receives project specific section 105 funds, i.e., St. Louis air toxics study. These funds are also assigned a unique budget code. In this manner, the MDNR charges expenses to, and tracks, its use of the air grant dollars it receives from Region 7.

A portion of the program's funds comes from Title V fees, which cannot be used to support section 105 grant funded activities. The Title V fees are used to fund the operating permit program activities. The Administration Section tracks the total revenue and expenses of the Title V fee account and reports annually to the MACC on the status of these funds. The most recent report, June 29, 2000, estimates that Title V fees will have to be increased significantly in 2004. The report is included in the Appendix.

A breakdown of funding and expenses for FY-2000 is shown below.

Sources of Revenue for FY-2000

Category	Amount	Percent
General Revenue	$ 654,000	6
Federal Grant	2,796,000	25
Permit Fees	300,000	3
Asbestos	192,000	2
Emission Fees	5,682,000	51

Vehicle Emission Inspection Fee	534,000	5
Interest Earned	929,000	8
TOTAL	11,100,000	

Categories of Expenditures

Category	**Amount**	**Percent**
Salaries	$ 5,764,417	40
Fringe Benefits	1,379,273	9
Operating Expenses	3,428,598	24
Grants to Local Air Agencies	2,698,642	18
Refunds	53,729	<1
Department Overhead	1,379,108	9
TOTAL	14,700,000	

Work Plans

With the recent advent of a two year work plan as part of the PPA, the state and EPA have begun to work more closely to develop shared environmental goals and objectives, which in turn are reflected in the APCP work plan.

The state has three planning documents which define the states' goals and objectives. In the first, broad goals for state government are set out by the Governor as part of his "Show-Me Results" strategic planning objectives. The "Show-Me Results" goal for air is; "Increase percentage of Missourians living where air and drinking water meet government standards as measured by compliance with air quality standard, ..." (see Appendix.) These objectives are posted on the state web site at "www.cpi.state.mo.us/mo_smr_title.htm."

Second, the MDNR planning objectives are published each year in its "Integrated Strategic Plan" (see Appendix.) This document identifies the vision, mission, and values of the MDNR, and further refines the environmental goals of the state by specifying outcome measures, objectives, objective measures, and strategies for each environmental media. For the air media the FY-2000 document shows:

Goal: Air - Preserve and protect the quality of Missouri’s air resources.

Outcome A - Missourians living where air meets government air quality standards.

Outcome Measure - The percent of Misssourians living where air meets government air quality standards (Show-Me Result).

Objective 1 - Reduce emissions, concentrations and exceedances for criteria and toxic air pollutants.

Objective Measures -

- Decreased yearly emission totals for criteria and toxic pollutants (corrected for number of sources).
- Reduction in the number of days per year the National Ambient Air Quality Standards (NAAQS) for ozone is exceeded at monitoring locations.
- Reduced annual average ambient concentration levels of criteria pollutants.

Objective 2 - Reduce the average quarterly concentrations of lead in ambient air.

Objective Measures -

- Reduced quarterly lead concentration levels near lead smelters.
- Reduction in the average blood lead levels in children as measured by the Missouri Department of Health.

Objective 3 - By 2005, reduce emissions of greenhouse gses to 1990 levels.

Objective Measures -

- Estimated trends in tons of emissions of carbon dioxide.
- Estimated trends in tons of emissions of methane.
- Estimated trends in tons of emissions of nitrous oxide and other greenhouse gases.
- Tons of coal, barrels of petroleum, cubic feet of

natural gas consumed.

Objective 4 - Improve Missouri's ambient visibility in sensitive areas.

Objective Measure -

- Increase in the number of days with visibility range greater than fifty miles at Hercules Glade and Mingo National Wilderness Areas.

Each of the Objectives are followed by a list of strategies (outputs) which, when implemented, will lead to accomplishment of the Objectives. The objectives and strategies are similar to those EPA develops for the Government Performance and Results Act and which are contained in the Office of Air and Radiation (OAR) annual Operating Plan.

The third document, the Division of Environmental Quality's "Fiscal Year 2000 Situational Analysis," is very detailed and contains budget and staffing projections for the upcoming year, and a very detailed work plan analysis of anticipated APCP activities. It is forwarded up through channels and used to support the MDNR's budget and staffing request with the legislature. The work plan activities portion of the report is similar to the Region 7 Division and Branch Operating Plans.

This document contains a table (below) which shows staff positions assigned to sections within APCP, and the funding source for those positions for FY-2000.

Program FTE Allocation by Function and Fund

Major Functons	General Revenue	Federal FY 1999	Federal FY2000	Asbestos	Emission Fees	Enhanced I/M	CMAQ	TOTAL
Director's Office	0.42	0.20	0.58		2.80			**4.00**
Administration	1.22	0.49	1.49		7.80	1.00		**12.00**
Enforcement	3.90	0.50	1.49	5.00	7.11			**18.00**
Planning	2.40	0.47	1.40		10.75	4.24	3.74	**23.00**
Permits	1.43	0.62	1.86		26.09			**30.00**
Tech. Support	3.03	0.83	2.48		19.41			**25.75**
TOTAL APCP	**12.40**	**3.11**	**9.30**	**5.00**	**73.96**	**5.24**	**3.74**	**112.75**

Discussions with the MDNR air program staff and a review of

the aforementioned documents indicates that EPA's goals contained in the OAR Operating Plan, and Region 7 air priorities, are factored into the MDNR documents mentioned above. This is accomplished by a late winter meeting between senior program managers of Region 7 and MDNR in which joint priorities are discussed, and by the communications between the EPA Air Planning and Development Branch (APDB) and the APCP in the spring when air program specific work plan activities are negotiated. These commitments are funded, in part, with federal section 105 grant funds. These funds are part of the MDNR's Performance Partnership Grant. The APCP provides a semi-annual and annual report on its work plan accomplishments. A copy of the FFY-00 Semi-Annual Report is included in the Appendix.

In summary, the MDNR has an effective process for establishing its own environmental goals and priorities, communicates effectively to establish joint priorities with EPA where possible, and reflects these priorities in its air program work plan with EPA.

APPENDIX - Grant and Work Plan Development

Financial Report - Projection of Revenues and Expenses

Show-Me Results Report

Integrated Strategic Plan Fiscal Year 2000 (excerpt)

Semi-Annual Report FFY-2000

Section IV

REGIONAL AND LOCAL AGENCY COORDINATION

As briefly mentioned in section II, there are four independent local agency air programs in the state. These programs focus on their own geographical areas of responsibility but must coordinate and cooperated with the APCP on a nearly daily basis.

The APCP has an annual work plan agreement with each of the local agencies, similar to that between the state and EPA (see Appendix.) This agreement contains commitments for emission inventory activities, monitoring activities, inspection and enforcement activities, and in some cases permitting activities. The local agencies report quarterly to the APCP on their work plan accomplishments.

The APCP annually audits at least one of the local agencies to access program performance. The most recent audit was of the St. Louis City Division of Air Pollution Control, in July, 1999. A copy of the audit report is contained in the Appendix.

APPENDIX - Regional and Local Agency Coordination

APCP/St. Louis City FY-2000 Agreement

St. Louis Audit Report

Section V

TRAINING

The APCP has an annual training budget set for each individual, which has recently been increased from $1,200 to $1,500. A new staff person may be allowed more, however, whereas an experienced person may not need that much. Each person has an annual training plan which lists training desired for the upcoming year. Each employee's performance appraisal planning document also has a training element identified as an annual requirement.

Training is obtained on-site through the Air Pollution Training Institute satellite downlink. These broadcasts are also taped for viewing at a later date by new employees or by staff who were not able to be present at the time of the original broadcast. Off-site training is also provided within the confines of the individual training allowance.

The MDNR staff fully participates in training offered by the Region 7 air program, at the State/Local Directors semi-annual meetings, and the semi-annual Permits workshops. Staff also attends training/conferences on monitoring, modeling, and emission inventory activities as time and budget allow.

The Planning Section organizes and coordinates an annual workshop for the regional and local agency staff. This workshop is presented by APCP staff. This two-three day workshop, generally held off-site at a state park conference center, brings together and unites all of the state air pollution control staff from the Jefferson City office and from all the out-state offices. This activity provides an excellent forum for training, coordination, and communication amongst the various offices. Agendas from two recent workshops are included in the Appendix.

APPENDIX - Training

Workshop Agendas

Section VI

EMISSION INVENTORY

Inventory Planning and Management

The Emissions Inventory Unit of the Technical Support Section collects information about air emissions from all regulated air pollution sources within Missouri.

The Inventory Preparation Plan (IPP), Quality Assurance/Quality Control (QA/QC) Plan, and Procedures Manual (PM) serve as the foundation that the emission inventory is built from each year. All three of these documents are updated as needed. The PM is located in the emission inventory supervisor's office for new employees and for quick reference by current employees. An IPP was developed in 1992. This could not be immediately found during the site visit. A comprehensive point source QA/QC manual is also kept in the emission inventory supervisor's office for reference.

MDNR sends out Emission Inventory Questionnaires (EIQ) each January to regulated pollution sources. There are several iterations of the EIQ and the version sent out depends on the amount of pollution that is historically emitted from a particular facility. A special form is sent to dry cleaners. Packets also include a note describing all recent changes in AP-42 emission factors.

The emission inventory questionnaire forms were developed in 1992. The four local agencies (St. Louis City, St. Louis County, Springfield, and Kansas City) that collect emission inventory information use the same forms as the state. A coordination meeting between MDNR and the four local agencies occurs each August. MDNR also communicates on a weekly to monthly basis with the local agencies on a more informal basis. MDNR feels the local agencies do a good job collecting information and getting it to MDNR by the agreed deadline.

The initial mail-out to sources in Missouri for 1999 included 1,150 Full EIQ packets, 276 EZ packets (facilities with low emissions), 155 Fee Only packets (facilities emitting below the deminimus level), 161 Dry Cleaners packets, 177 Portable Equipment packets, and 31 Charcoal Kiln packets. This comes to a total of 1,950 packets sent to regulated facilities in Missouri. The four local agencies sent out an additional 707 facility packets. Currently, these regulated facilities have submitted more than $5.5 million dollars in emission inventory fees.

MDNR has a Technical Assistance Program (TAP) which helps small businesses fill out their Emission Inventory Questionnaire form free of charge. This program started in the early 1990s. Interest among industry in EIQ training has declined significantly during the last few years.

When EIQ forms change, MDNR seeks input from affected industry and trade associations. Many businesses claim they could not fill out their EIQ form due to employee turnover. It was not clear whether or not these claims were referred to the TAP or to annual training sessions that occur in Kansas City and St. Louis.

Data Documentation and Data Entry Procedures

The EIQ forms are due back on April 1st. Once received by MDNR, they are entered into a tracking system. The forms are put into a secured file area where they must be checked out by staff for subsequent data entry and review.

The staff keeps a check-sheet to track missing data. Forms requesting all non-submitted information are sent back to sources for completion before data entry begins.

Sources that do not return their EIQ forms are called by telephone and sent reminders by mail. If the form is not returned by June the source is flagged for an enforcement action.

The Technical Support staff is currently installing a new database system called the Missouri Emission Inventory System (MoEIS). More information regarding the review of MoEIS is available in Appendix A.

The staff is working to implement the full range of automated quality assurance checks into the database system. The program does not currently check facility calculations or the range of values entered into the system, although this feature is being planned for implementation.

There is no historical data in the current database system. It does not have an automated inventory data dump into the NET format for submission to EPA.

MDNR Response

The APCP has access to historical data in our Paradox database system. We are capable of supplying EPA with the data in a NET format and we plan to automate the "download" from MOEIS to NET in the future.

Emissions Reporting and Submission

Missouri submitted its 1996 criteria and toxic inventories to the EPA in the electronic NET format. The criteria inventory submission contained sources emitting greater than 100 tons per year in attainment counties and 25 tons per year in non-attainment counties. They were unable to fill all the required fields for submission since they do not collect certain required elements from industry. Most notably, they do not distinguish emission release point types (such as stacks versus fugitive emissions.)

MDNR Response

We will revise our Emission Inventory Questionnaire forms to indicate the type of emission point.

An attempt to identify as many as possible based on the emission release description was made but this did not result in a fully populated inventory field. No additional quality assurance measures were taken during the conversion of data from the old Paradox data format to the new NET format. Facilities that identify certain process description codes as trade secret had emissions reported as an aggregate for the entire facility. This is because the NET format does not include a field designating emission release data as private. Since the EPA stated all information submitted to the NET would be considered public information Missouri could not submit the data marked private due to legal considerations. Missouri is the only state in the country that protects this information.

MDNR Response

The data in Paradox was previously quality assured when it was received. Quality assurance measures were implemented again when the data was converted (see attached memo from Mike Stansfield.)

Facilities and Resources

Each employee has their own work space (office or cubicle) that appears sufficient to effectively complete their daily tasks. All employees have access to the Internet and have easy access to on-line versions of AP-42 and the Emission Inventory Improvement Program (EIIP) inventory guidance volumes. A

procedures manual and QA/QC manual are kept in the Emission Inventory supervisor's office. This office serves as the centralized library for emission inventory procedures and guidance.

Emission Inventory Development

Special Inventory Initiatives

The biogenic inventory supporting the St. Louis Periodic Emission Inventory for 1996 has been corrected based on monitor information obtained through the OZIE study. This study estimated that the BEIS model over-predicted biogenic VOC emissions (by a factor of 2).

A detailed and extensively quality assured inventory was prepared for the NO_x SIP Call. Additional questionnaires were sent to NO_x SIP Call sources and potential sources. This initiative resulted in improved coordinate information and heat throughput data for the surveyed facilities. Increased scrutiny was given to each submittal regarding the correct use of AP-42 emission factors and emissions calculations. The result is an excellent comprehensive inventory of NOX sources in Missouri for 1995 and 1996.

A full air toxics inventory is being prepared for the St. Louis area in support of the St. Louis Clean Air Project. This is the first toxics inventory in Region 7 that will compile toxic emissions from area, mobile, and off-road mobile sources.

Geographic coordinates from major point sources in Missouri have been collected by inspectors and interns during the last few years. This data has not been joined to the emissions database at this time, but MDNR expects to do this in the near future. The coordinates are taken at a facility's front door and are not inclusive of emission release point coordinates. It is unclear whether or not these updated coordinates will be included in the 1999 emission inventory submittal.

Traditional Emission Inventories

Missouri has compiled point source information for the past 10 years. Non-point source data have only been compiled for the St. Louis non-attainment area and Kansas City maintenance area in the past. Currently, Missouri is planning to complete a state-wide mobile and area source inventory for 1999. This will consist of ozone precursors only.

Missouri completes point source inventories for all criteria pollutants and hazardous air pollutants. MDNR is not currently compiling data for $PM_{2.5}$ or ammonia emissions because the $PM_{2.5}$ standard is being reviewed by the Federal courts.

Appendix B contains more detailed information regarding the collection of point, area, on-road mobile, off-road mobile, and biogenic inventories in Missouri.

Computer System Review

See Appendix C for more details regarding which elements of the computer program were reviewed. The new database system is called MoEIS and has not been fully implemented. When it is fully installed it will be an excellent tool for the staff by reducing workload and improving the quality of data.

Missouri is planning to have industry directly enter their emissions information via the world wide web beginning in the summer of 2002.

Recommendations and Discussion

- EPA does not currently require processes to be labeled as to which MACT standard they are regulated by, but this will certainly be a need in the future during the residual risk assessment process. This is because many MACT standards apply at the process level of a facility and trading between MACT processes is allowed in some instances.

- Report the emission type, such as horizontal or vertical stack and fugitive emissions.

- Join the updated GPS facility coordinates to the emissions data.

- Need to implement automated QA/QC into MoEIS since the 1999 inventory is currently being compiled.

- Develop a fixed program extension to MoEIS to dump emissions data into the NET format for submittal to EPA.

- Begin planning to compile a statewide PM area and mobile source inventory to meet the upcoming needs for Regional Haze modeling.

- Begin planning to compile a statewide off-road mobile inventory for all pollutants.

- Work to promote TAP to businesses in order to keep submitted EIQ data quality at a high level.

Commendations

- Everyone in the section has a set amount of training budget per year which gives everyone an equal opportunity to keep up with the changing inventory methodology.

- The potential of MoEIS is exceptional. The final product will be powerful and should help reduce the workload of staff and minimize data entry errors.

- The tracking system does a good job of making sure all sources submit data to the inventory and that the sources submit all required data before data entry is initiated.

- The toxic inventory for the St. Louis Community Air Project is the first non-point source toxics inventory in the Region to date. This initiative will establish the knowledge and skill to compile this type of inventory as needs arise in the future.

- The NO_x SIP Call inventory is a thorough compilation of NO_x sources in Missouri and improved several important types of data received from this group of sources.

- The yearly coordination with the local agencies is extremely valuable in keeping the positive working relationship with these agencies and ensuring a quality product.

APPENDIX - Emission Inventory

Planning Checklist

Inventory Checklist

Computer Checklist

Section VII

MODELING

The review of the air dispersion modeling activities of the Air Pollution Control Program, Missouri Department of Natural Resources (MDNR), involved meetings with four of the Technical Support Staff. A limited review of the modeling associated with construction/operating permits was done. As expected, the review of the MDNR modeling activities confirmed that the modeling staff are very knowledge in air dispersion modeling and follow EPA modeling guidelines (40 CFR, Part 51, Appendix W, Guideline on Air Quality Models).

Their modeling activities include review of Prevention of Significant Deterioration (PSD) permit applications, State Implementation Plans (SIP), and regional modeling. Pre-application meetings, working with the consultant/company during development of an application, and final evaluation of the modeling are the usual techniques done by the staff in an evaluation. Site visits are frequently made to assist in the evaluations. Emission inventories and meteorological data are part of the evaluation. In some cases the staff does modeling in support of an application, e.g., Doe Run Herculaneum (SIP) and Fort Leonard Wood (PSD). Extensive regional modeling for ozone has been done, or is being done, in the Saint Louis and Kansas City areas.

An area that needs to be revisited is the modeling associated with the construction and/or operating permits. Screening modeling for construction/operating permits is usually done by permit engineers. This is not unique to the MDNR. The screening involves the use of a nomogram that was prepared by the technical staff, or the use of the SCREEN3 model. The nomogram is considered conservative by the staff. The nomogram does not contain a background concentration. We recommend that a background value be included in the nomogram. A background value should be added to any SCREEN3 concentration. The modeling staff rarely see the screening modeling. Many of the permits that were reviewed had PM_{10} limits close to the 24-hour National Ambient Air Quality Standards (NAAQS) limit of 150 micrograms per cubic meter. Our concern is that the SCREEN3 model does not always predict higher concentrations than a refined model, i.e., a refined model may predict concentrations greater than the NAAQS.

While concentrations from these minor source permit emission limits may meet the NAAQS, they frequently allow the short-term increment standard of 30 mg/m^3 to be exceeded. Although

increments are usually not considered until a PSD permit application is submitted, increments are consumed and may prevent a future PSD application from being approved unless the existing sources that have construction/operating permits reduce their emissions. We recommend that increment consumption be considered in evaluating these minor sources as well as any PSD source.

There is a need for continued training in modeling. Training for the new models, e.g., AERMOD, CALPUFF, recently proposed for inclusion in the Guideline for Air Quality Models will be required. Training for regional models, e.g., MODELS 3, will also be necessary. The training must include emission inventory, e.g., SMOKE, and meteorological, e.g., MM5, models as well as the air dispersion models.

MDNR Response

The APCP appreciates the support and answers to questions provided by EPA Region VII. The cooperation received from EPA Region VII allows modeling staff to communicate effectively with industry and consultants regarding difficult issues.

Procedures used for nomograph and screening analysis conducted by permit engineers are under constant evaluation. The use of background concentrations for this type of analysis is of particular interest. In the past, background concentrations have not been used due to the conservative nature of the screening analysis. However, based upon the recent changes to the nomographs and EPA's concerns, APCP will reevaluate the need for inclusion of background concentrations in screening analysis.

In addition, minor source permits issued in PSD baseline areas must have an increment evaluation as described in 10 CSR 6.060(6). The modeling group has emphasized this issue to the construction permit group and improvements have been made. However, the issuance of minor source permits and the tracking of baseline areas are important parts of the permit rule. Therefore, we are committed to examining these permits closely and ensuring the necessary increment evaluation is conducted.

Section VIII

SMALL BUSINESS ASSISTANCE PROGRAM

Section 507(a) of the Clean Air Act requires each state to administer a Small Business Assistance Program (SBAP) that provides small, stationary source businesses with technical and environmental compliance assistance.

To review the state of Missouri's SBAP, eleven questions were used to assess the status of the program. Those eleven questions and the respective answers are outlined below.

***

1. *Are the Ombudsman and Compliance Assistance Program (CAP) positions filled in accordance with Section 507(a) of the Clean Air Act?*

Finding: The Ombudsman is in place and six of the seven CAP members have been appointed and they are fulfilling their responsibilities identified by the Clean Air Act.

2. *Does the Ombudsman have direct access to state agencies and officials to relay concerns of small businesses?*

Finding: Yes. In fact, the Ombudsman is located in the office of the Governor which promotes enhanced access and recognition of the Ombudsman's role.

3. *Does the Ombudsman have authority and access to obtain data from state agencies?*

Finding: Yes. The Ombudsman has this access and utilizes it as necessary. Again, this access is enhanced by virtue of being located in the Governor's office.

4. *Have sufficient resources been provided to successfully fulfill Ombudsman / SBAP responsibilities?*

Finding: The Program has headquarters in Jefferson City and offices in Lee's Summit and St. Louis. There is a budget, adequate staffing, and regular meetings including a full calendar of events hosted by the SBAP.

5. *Has the CAP rendered any opinions on the effectiveness of the SBAP effectiveness?*

Finding: The panel has stated in public forums their belief that the SBAP is very effective and have, on several occasions, commended the Technical Assistance Program for their efforts in assisting small businesses. The panel has stated their concern as to the effectiveness of the Ombudsman. Although these commendations have not been entered in a formal written document, these sentiments have been stated during the committee meetings.

6. *Have any reports been submitted to EPA's Small Business Ombudsman?*

Finding: The "State Small Business Stationary Source Technical and Environmental Compliance Assistance Program (SBTCP) Annual Reporting Form" has been provided to EPA's Ombudsman every year since 1995. This report covers the previous year's activities.

7. *What outreach techniques are currently used by the SBAP?*

Finding: The program features seminars, the Internet, public meetings, on-site visits, technical bulletins, and articles in state publications as well as a toll-free phone number for inquiries.

8. *Does the SBAP coordinate with other programs, states, etc?*

Finding: The Missouri program actively participates in a forum of small business representatives facilitated by Region 7 as well as the national network of small business assistance programs.

9. *Describe how well the SBAP provides compliance assistance to identify applicable requirements and obtain appropriate permits.*

Finding: As described in item #7, the program utilizes every conceivable means of outreach and more than adequately informs affected interests. Based on the input received during the public meetings, both the CAP and the public consider this program very effective.

10. *Has a method been established for ascertaining the eligibility of small businesses to receive assistance under the SBAP?*

Finding: The state adopted regulations that reflect the eligibility definitions outlined in the Clean Air Act.

11. *What mechanisms exist to exclude sources with sufficient financial and technical resources to meet their obligations?*

Finding: The state currently uses the approach of extending and offering assistance to any entity that meets the small business eligibility requirements identified by the Clean Air Act and the state's regulations.

Summary and Recommendations: The state administers a very effective program. By maintaining three offices and holding regular meetings and offering a variety of outreach activities, small businesses are provided a wealth of compliance assistance.

The only shortcoming noted during this review concerned the state's website listing of the Ombudsman (it features the name of a previous Ombudsman rather than the current one). However, any inquiries by small businesses do lead to the correct telephone and e-mail address of the Ombudsman so this is a relatively small matter compared to the overall effectiveness of the program.

Chapter IV

PERMITTING

TABLE OF CONTENTS

Section I.

INTRODUCTION

On July 10-13, 2000, EPA Region 7 performed an evaluation of Missouri's air permitting programs. This review was conducted in part to fulfill a regional office commitment with EPA's Headquarters to perform an annual comprehensive review of at least one state or local agency permitting program and in part to satisfy EPA Region 7's new policy on periodic review of state and local programs. The overall scope of the review focused on 1) synthetic minor permitting, 2) NSPS [New Source Performance Standards] and NESHAP [National Emission Standards for Hazardous Air Pollutants] determinations, 3) establishment of enforceable permit conditions and 4) generation, accounting, and use of Title V fees, and 5) the interaction between the Title V and NSR [New Source Review] programs.

The review was initiated by a letter to the MDNR dated May 1, 2000, and a subsequent request for a list of construction permits issued since 1998. The Permitting Section of the APCP provided a timely response for each request. The review team appreciated the cooperation of the PS staff during our visit.

The review team evaluated 25 source files containing an estimated 60-70 permit projects. Most of the projects reviewed were permitted in either 1998, 1999, or early 2000, and represent only a small fraction of the 700 plus projects approved during this time frame. During the review, the team also discussed a number of the projects with permit staff and had a general permitting conversation with the permit managers.

Overall, we found that the Permitting Section is running a very competent permitting program. As with any program, there are always gaps and areas for improvement. However, advances made since the last formal program review in the late 1980's reflect that the Permitting Section has matured and is dedicated to preserving air quality. As evidenced by the large number of permit projects with screening modeling, the Permitting Section is interested in protecting ambient air quality standards and acceptable ambient toxic concentrations even when evaluating smaller source operations; despite the controversy it brings.

The highlights of the manager interview are summarized in Section II. The major findings, including both "commendations" and "areas for improvement", are described in Section III. A summary of the Title V fee review can be found in Section IV. The list of permits reviewed and the specific details of each

review are further described in Appendices A and B, respectively. Approximately two-thirds of the permit files selected for review were targeted based on problems indicated in an associated operating permit application or based on large increases or decreases in emissions indicated by the Toxics Release Inventory (TRI) data system. The other third involved sources randomly selected from a list of completed intermediate operating permits. As a consequence of this targeted approach, it is possible that the problems noted in certain files may be magnified and may not be representative of the permitting program as a whole.

Because of the EPA Region 7's national commitment to evaluate all major source preconstruction permits prior to issuance, the team chose not to evaluate the PSD [Prevention of Significant Deterioration of Air Quality] program during the on-site program review. The team also chose not to concentrate on specific Title V permits since Region 7 receives all draft and proposed permits and has an opportunity to comment on these permits in real time. Instead, the review team focused on the interaction between NSR permits and Title V to assure that preconstruction permit terms were properly being incorporated into Title V permits. For completeness sake, the PS issued approximately 14 PSD permits and over 160 Title V permits during the three year review period.

Section II

GENERAL DISCUSSION WITH PERMIT MANAGERS

Jon Knodel met with Randy Raymond and Refaat Mefrakis to talk about current highlights or other areas of interest or concern in the construction and permitting programs.

The Permitting Section expressed some concern about staffing levels. While positions have been allocated, the state is having difficulty keeping them filled. Of the 30 positions allocated for the construction and operating permit programs, nine were vacant at the time of our review; five in the operating permits group and four in the construction permit group. Staff with two or more years of air experience seem to be a very attractive grab for consultants and companies. With the boom in the number of construction permit applications, in particular for PSD, the Permitting Section may find it challenging to provide good, timely, customer service. Based on recent pre-application meetings, the state is expecting as many as nine new PSD permit applications, including five new portland cement construction projects and several more turbine projects.

The Permitting Section is currently using 10-12 contractors to assist in Title V permit development to help fill the staffing shortfall. After an initial ramp up, the program has had some success with contractors preparing Title V permits. The Permitting Section attributes this success to the standardized nature of the operating permit program; with minimal need for technical decision making. Because of the more complex nature of construction permits, the state is not currently using any contractors, but is paying substantial overtime to the Permitting Section staff to keep on top of the overload.

The state currently assigns two engineers to each construction permit project. The lead engineer usually has some experience with the particular source category and helps to train the other engineer. The state hopes this mentoring approach will help to minimize inconsistencies between permits. The mentoring also serves as a useful training opportunity for new staff and as a tool to cross train existing staff.

The state is trying harder to look at entire construction projects rather than individual emission units in an effort to cut down on possible circumvention of major source permitting. By using an in-house permit administrative tracking system (PATS), keeping a running history of permit projects in the “fact sheet”, assigning the same engineer(s) to all facility projects, and relying on good institutional knowledge, the state hopes to cut down on submission of multiple-sequential projects.

The Permitting Section noted that they have been approving a significant number of “no permit required” determinations, based on the states new 0.5 lb/hr “deminimis” threshold recently approved into the SIP. The new permitting threshold has taken some pressure off of the preconstruction permit staff to conduct more formal reviews for very low emitting equipment.

In anticipation of a changing workload following initial issuance of Title V permits, the Permitting Section is exploring options to reorganize its permitting groups. One interesting option under consideration is to move several operating permit engineers into the field offices where they would be closer to the source, could assist in inspections, and could more easily fine tune re-issued Title V permits.

The state is awaiting the outcome of the “CLEAN” litigation and discussing how they might deal with any adverse decisions. The litigation, brought primarily by industry, challenges the basis for the state’s “basic” and “intermediate” operating permit programs; calling them “more stringent” than minimum federal

requirements. Under Missouri's "055" statute, the state program may not be more stringent than the federal program. The Permitting Section contends that these programs are voluntary in the respect that they allow a source, at their discretion, to seek restrictions that would keep them out of major source PSD and Title V review. The implications could be severe if minor source operating permit mechanisms are eliminated. In all likelihood, many additional sources would have to seek Title V permits because they would not be able to limit out of major source review.

The permit program noted that training is not currently a problem. Title V fees have helped to get staff to many good training courses. The biggest obstacle to training is finding the time for staff to attend. The Permitting Section requested that EPA host more courses in the Kansas City area to cut down on staff time away from the office.

The operating permits group anticipates that they will issue 90-95 percent of Title V permits prior to years end; despite staffing shortfalls. The Permitting Section currently dedicates one permit engineer to conduct reviews of Title V permits from the local agencies; in particular for St. Louis City where sources are allowed to draft their own Title V permits.

The state has developed a series of ambient impact nomographs to help estimate air quality impacts from quarries. The Permitting Section believes this approach provides more realistic results than those predicted by the SCREEN3 model currently used for other construction projects.

Over the last several months, the state has been putting together an in-house database of all past and present construction and operating permits. Based on the popular Adobe® format, the permits are searchable by keyword and phrase. The state has currently scanned in and converted nearly 450 megabytes of permitting information.

EPA expressed its appreciation for the Permitting Section's PSD efforts over last couple of years. The Permitting Section has kept the regional office apprized of new projects and has sought specialized assistance dealing with a number of issues related to turbine projects. We appreciate the states' leadership in this area.

Section III

SUMMARY OF FINDINGS AND CONCLUSIONS

Overall, the Permitting Section is running a very competent permitting program. The Permitting Section is fortunate to have several staff with many years of experience and knowledge in the air program. As we have found in other permitting programs, this institutional knowledge is the glue that holds the program together. As was evident from our interviews and file review, the staff are knowledgeable about the air program and generally make conservative decisions. Screening modeling for minor sources and toxics reviews are indicative of the program's desire to protect public health. As during any review, we found both strengths and weaknesses in the program. These are described in more detail below. On balance, though, the program is on the right track and is a good model for others to follow.[1]

Commendations

- Despite pressure to issue quick (or no) permits for smaller sources, the Permitting Section conducts numerous air quality- and/or HAP-impact analyses, on a project-by-project basis. It was encouraging to see that the minor source program has a strong NAAQS protection component.

- In recent projects involving HAP emissions that are potentially major, it is evident that the Permitting Section is thinking about 112(g) requirements when looking at sources with major HAP levels. We encourage the Permitting Section to remain vigilant when evaluating toxics projects.

- The construction permit fact sheets are very informative of both past and present project activity. Overall, the sheets provide a very detailed explanation of the project at hand and any associated impacts analyses. The "history of projects" is an essential tool for understanding the pace of source expansion and whether new emission units have been properly permitted. We understand that fact sheets are a time consuming process, but the approach helps to provide a

[1]We encourage the reader not to over-emphasize or compare the relative number of strengths or weaknesses, or the relative length of text, summarized in this section. Overall strengths in the program heavily outweigh any weaknesses. By necessity, the "areas for improvement" and the basis for these recommendations requires a more comprehensive review and write-up.

clear basis for the current activity at a plant and leaves a very good trail for future permit writers. We encourage the Permitting Section to continue this practice.

- Recent evidence indicates that the Permitting Section is questioning multiple, sequential projects that occur over a short amount of time. Several recent enforcement actions challenge this common practice to break apart projects into smaller pieces to avoid major source review. We encourage the Permitting Section to remain vigilant in this area to assure that “related” projects undergo major stationary source review.

- The searchable database for all construction and operating permits, recently developed by the Permitting Section, is a very useful tool. The database will provide construction permit writers with an invaluable look back at past projects to determine how a current project should be evaluated. It will also assist operating permit writers to incorporate all applicable requirements from preconstruction permits. We encourage the Permitting Section to continue support for putting future permits into the database and to consider making this invaluable tool publicly available on the states’ web server or by other means.

- It is evident that the Permitting Section has procedures and practices in place to incorporate past construction permits into Title V operating permits. Title V permits include clear references to past permits and appear to incorporate all applicable preconstruction requirements. All of the operating permits targeted for review -- based on NSR problems described in the company’s initial compliance certification -- appear to have adequately fixed the NSR problems prior to operating permit issuance.

- The air program’s internal permit tracking system (PATS) appears to be quite comprehensive and provides the Permitting Section with an invaluable tool to track individual projects and the resources dedicated to the permitting program. The construction permit numbering scheme was very helpful for targeting groupings of permits to determine if closely spaced projects should have been combined as part of a larger project or not.

- Nearly every permit with a long-term emission cap included detailed record keeping forms to assist the source with

compliance tracking. While a time consuming effort for the permit staff to develop the mass-balance-based forms, these forms provide an essential starting point for determining compliance with the applicable standard. We encourage the Permitting Section to include explicit instructions in each permit for tracking compliance with long-term emission caps.

- We found many telephone conversation records and e-mails between the permit review staff and sources and their consultants throughout the files. This is a good indication that staff are conducting comprehensive reviews and are not necessarily taking the information in permit applications at face value.

- We noted many instances where staff reviewed, challenged, and corrected emissions estimates made by sources and consultants. This is a healthy process to assure that applicants use the most recent, or best documented, information.

- Several files indicate that MDNR has made significant use of their SIP-approved "preconstruction waiver" process for true minor projects. The files generally contain significant documentation showing that the source has satisfied the conditions outlined in the rule. Further, most highlight that EPA may take an enforcement action if the conditions of the waiver are not met or if the project turns out to be PSD-related. While EPA continues to be concerned about the preconstruction waiver process in general, we encourage the Permitting Section to continue to explain the consequences of failing to construct in accordance with the approved waiver.

- Thanks again for the Permitting Sections' assistance and participation in the Title V Citizen Training, held in St. Louis on June 16th and 17th. Despite uncertainty about the usefulness of such training, participants found it to be very helpful. EPA also found it to be worthwhile and a good interaction with groups that are typically pretty quiet in the permitting arena.

- We appreciate MDNR's commitment to meet EPA's "end of year" Title V permit issuance goal. The Permitting Section has taken the challenge seriously and will come very close (90-95%) to issuing all permits on time.

- We appreciate the Permitting Sections' efforts over the last two years in conducting rigorous and thorough BACT reviews for turbine NO_x and CO controls. Despite sometimes difficult conversations with the utility industry, the state has held the line and has made good decisions consistent with other rigorous BACT determinations made across the nation.

Recommendations for Improvement[2]

- We noted several instances where the files contained no supporting documentation from the source for emission estimate-related information, including emission factors and control equipment efficiencies. In many cases, control equipment efficiencies were critical for limiting potential to emit below major source thresholds, yet the file contained no documentation showing how, or if, this efficiency would be met. In others, applicants relied on unrealistic control efficiencies of 99.99% for PM_{10} control. The Permitting Section should consider requiring a stack test and periodic follow-up testing for equipment that is permitted to emit up to the major source significance thresholds. This approach would assist the Permitting Section to develop better emission factors and to make better decisions by relying on site-specific information. This site specific information also allows the source to make an informed statement when making its periodic compliance certifications under Title V. We also note that generic AP-42 emission factors are not appropriate for determining compliance with an emission limitation, unless the emission unit is identical to one used to develop the factor or the factor represents a conservative, theoretical maximum. By definition, AP-42 factors are the average of many emission test results; meaning that roughly half of the emission units emit above the standard, and the other half below. Without adequate verification, it is unreasonable to

[2] The "recommendations for improvement" are generally listed in priority order from those of most concern to those of least concern. The first five should be considered high priority items, the next five medium, and the last four low.

assume that all of the permitted units will be on the low side of the factor. ✯✯✯✯✯✯[3]

- In at least one circumstance, a new "greenfield" company evaluated the potential to emit for both PM and PM_{10} from all of its emission points. Both sets of calculations relied on well documented emission factors from AP-42 and other emission factor guidelines. Yet, in the final permit and review summary, the Permitting Section makes no mention of PM. This could be a critical oversight, in particular for those projects with estimated emissions at or near the major source threshold. Any slight modification, as part of the original project, could easily put the source over the major source applicability threshold, both for PSD and Title V purposes. Neither the permit nor the review summary provide an explanation on why PM emissions were not considered. By looking only at PM_{10}, the Permitting Section may be allowing sources to delay or avoid major source review. To help clear up some of the confusion about how PM and PM_{10} are considered for Title V purposes, EPA issued guidance titled "Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V", on October 16, 1995. This guidance can be found at http://www.epa.gov/rgytgrnj/programs/artd/air/title5/t5memos/pmregdef.pdf. Further, both the state rule and Federally approved SIP retain both PM and PM_{10} as regulated air pollutants for minor and major source preconstruction permitting purposes. Therefore, to minimize any potential misunderstandings between EPA, the state, and sources, we recommend that the Permitting Section fully consider both pollutants when evaluating construction projects. ✯

- At least two projects included screening modeling to evaluate ambient PM_{10} impacts. Based on these analyses, emission and production limitations were set based on an allowable impact of 149.95 ug/m^3; or 99.97% of the 150 ug./m3 NAAQS standard. This approach may have several flaws and should be further evaluated. Specifically...

  - The screening analyses did not appear to consider background PM_{10} concentrations. In some areas, background already accounted for **a** to ½ of the

[3] The "✯" indicator provides the reader with an idea of how often the issue was documented during the review.

standard. In at least one case, the permitted PM_{10} limit was likely two times higher (or more based on discussion below) than it should have been because background was not considered. We recommend that a representative background concentration be accounted for when allowing a source to emit up to the NAAQS.

- Screening modeling appears to have focused only on the NAAQS, with little or no attention to increment. While EPA's minor source permitting guidelines, found in 40 CFR §51.165, include no specific requirements to perform an increment analysis for minor source projects, the Clean Air Act presumes that a state's policies, procedures, and rules will be protective of increment. Therefore, we recommend that if screening modeling predicts concentrations above 30 ug/m^3 (the Class II increment) and the source is located in an area where the baseline has been triggered, then the state should optimize the PM_{10} emission limitations to protect the increment, rather than focusing solely on the NAAQS. If a source wants to justify a higher PM_{10} emission limitation, then refined modeling may be necessary.

Our comments are not intended to discourage the Permitting Section from continuing its use of "conservative" screening analyses. However, we encourage the Permitting Section to consider background concentrations and increment consumption as factors in these analyses. ✯✯

- At least two permits contained a 12-month rolling PM_{10} emission cap in lieu of a short term emission limitation. The permits required the applicants to demonstrate compliance with a PM_{10} cap through the use of a mass balance equation using the production output of the affected equipment along with a site specific PM_{10} emission factor. Given the uncertainty in many factors affecting particulate matter control, including raw material quality, moisture, and ongoing control equipment performance, it is unlikely that the emission factor approach is suitable to verify compliance with the cap. Without substantial "periodic" or "compliance assurance" type monitoring of the control device, or frequent verification of the site-specific PM_{10} emission factor, this compliance technique is not recommended. None of the permits containing a PM_{10} emission cap had adequate periodic monitoring to evaluate ongoing

control equipment performance or the overall emission rate. This concern was magnified in at least one case where the estimated project potential emissions were at or near the PSD significance thresholds and the company had certified past, poor baghouse performance. EPA's June 13, 1989 "Guidance on Limiting Potential to Emit in New Source Permitting", found at http://www.epa.gov/rgytgrnj/programs/artd/air/nsr/nsrmemos/limitpotl.pdf may provide additional clarification. ✯✯

- Our review found a significant number of "as built" projects; projects that were constructed prior to Permitting Section approval without the benefit of any ambient modeling or technology review. This may indicate that new companies are not getting sufficient advice from various trade group representatives, commerce and growth organizations, or chambers of commerce to consult with MDNR prior to constructing. It may also indicate that the Permitting Section could do a better job getting the word out to companies about their permitting obligations. We encourage the Permitting Section to consider making its permit forms and instructions -- along with easy-to-understand applicability guidance – available on its web site. Periodic permit training workshops, presented in different parts of the state, may also help to reduce the number of "as built" projects. ✯✯✯✯✯✯

- We found a couple of instances where the Title V permit was used to change an existing preconstruction requirement, but the preconstruction permit was not actually changed. This is inconsistent with EPA guidance (see http://www.epa.gov/rgytgrnj/programs/artd/air/title5/t5memos/hodan7.pdf) and may create serious enforceability problems, since the original construction permit continues to be a separable and enforceable document. We encourage the Permitting Section to follow EPA policy and simultaneously change both the Title V and construction permit. ✯✯

- We noted many instances where the permit was unclear on the question of NSPS, NESHAP, or MACT applicability. Many "...may be subject to..." statements were found throughout the permit files. Further, most NSPS applicability determinations were not very well documented. In some cases it was clear from facts in the permit application that the NSPS-NESHAP-MACT standards should apply. In others, though, details about equipment relocation and equipment

construction dates were indeterminate. Generally, though, most applicability determinations tended to err on the conservative side with more equipment subject to the standards than not. We encourage the Permitting Section to restate any assumptions used to make a NSPS-NESHAP-MACT applicability or non-applicability decision in the permit fact sheet. We also encourage the Permitting Section to work with the enforcement group to make a definitive applicability or nonapplicability determination prior to preconstruction permit issuance, as many companies rely (incorrectly) on the construction permit as their sole listing of air pollution control obligations. ☆☆☆☆☆

- At least one of the more recent construction permits included parametric monitoring for control devices, presumably as a lead in to periodic or compliance assurance monitoring in the Title V permit. This is great! Many of the applications also claim reasonably high control equipment efficiencies -- most of which are necessary to keep the emission unit below major source thresholds. However, few, if any, of parametric measurements are accompanied by a control equipment performance test. Without such baseline performance measurements, it may not be possible to make a meaningful link between the control equipment performance and emissions. Without performance data, it is also nearly impossible for the source to certify, or for the state or EPA to determine compliance with the corresponding emission limitation. Therefore, we recommend that when parametric measurements are used to verify ongoing performance of control equipment, that the state rely more on the guidelines outlined in EPA's Compliance Assurance Monitoring Technical Reference Documents; available on EPA's TTN-EMC web site. It may also be beneficial for the construction and operating permit teams to complete both the introductory and advance "Baseline Inspection Techniques" courses to provide a better understanding of the link between emissions data and control equipment performance data. Lastly, internal peer review by the Air Enforcement Section may also help to improve the enforceability and usefulness of parametric measurements. ☆

- Several "older" project files indicated that sources likely staggered projects to avoid PSD review. While we understand that it is easy to criticize these projects in hind-sight, with PATS it should be possible for permit reviewers to look

back to determine if possible circumvention is taking place. We encourage the Permitting Section to use PATS and the historical permitting information compiled in the permit fact sheets to routinely question multiple, closely spaced projects. We also encourage the Permitting Section to include any "like kind" or "no permit action" decisions in the fact sheet permitting history to provide a more complete picture of all permitting actions at the source. ✯✯✯

- All permits with an emissions cap limitation specified an averaging time of 12 months, rolled monthly. The "rolling" aspect is generally acceptable, but of the permits reviewed 1) none indicated that the Permitting Section required the source to justify the need for such a long term emission cap, 2) none had a clear verification or reporting mechanism for determining compliance during the initial 12-month period, and 3) all imposed a "monthly" record keeping and verification of compliance contrary to EPA policy of "daily" record keeping. We recommend that the Permitting Section document the need for a rolling 12-month period in the permit fact sheet. If a long-term period is justified -- based on a highly variable day to day emissions fluctuation – then the permit should also include a special condition for the first 12-month period which states, for example, "that any exceedance of the cap during the initial 12 month period constitutes a violation which must be immediately reported to the Permitting Section". If emissions are not variable, though, then the permit should impose shorter averaging periods. ✯✯✯✯

- While the mass-balance-based record keeping forms included with most "capped" permits provides a good basis for documenting source emissions in a single report, the methodology for making the calculations is often unclear. In many cases, the form accounts only for coating use but not for clean-up, wipe, thinning solvents, or off-site waste disposal. In addition, the methodology for determining VOC content is rarely specified, leaving too much room for interpretation. Lastly, control efficiencies are rarely required to be demonstrated, and are not necessarily overly conservative. Therefore, it would be helpful for the permit, or the record keeping forms, to specify the exact methodology -- in terms of a mass balance equation or detailed instructions -- to make clear how the emissions must be calculated. ✯✯✯

- The connection between the final permit and the construction application is not clear in all cases. Many newer permits contain "standard" language that requires a source to "adhere to the specifications and conditions listed in the application, the permit, and the project review". The Permitting Section notes that this catchall language is necessary to assure that a source builds the project exactly as reviewed. However, we noted several instances where "key" aspects of the application -- that would limit potential to emit or are otherwise required to ensure compliance -- were not included in the permit. For example, one applicant requested a limit on fuel usage to remain a minor source. This limitation was not included in the permit, nor discussed in the project review. Without the appropriate fuel use limitation, the source should have undergone PSD review. In another case, a bottleneck based on two production shifts was used to limit emissions, but no corresponding limitation was placed in the permit. Are the applications limiting in these two cases? Would an inspector really dig through a permit application for "hidden" limitations not otherwise described in the permit? Do inspectors even have access to permit applications? As a practical matter, probably not. Therefore, we recommend that any assumptions used to limit potential to emit or otherwise limit source operations be explicitly included in the permit. ✯✯✯

- We noted some concerns about the Permitting Section's application of "like kind" replacements and the lack of any evidence of netting. Several "significant" pieces of equipment appear to have avoided permit review. We believe that the Permitting Section should evaluate projects on an "actual-to-PTE" basis test using the traditional contemporaneous emission change process. Further, we believe that any control efficiencies used to limit the potential to emit should be made an enforceable permit condition, either as a percent reduction or emission limitation requirement. This failure to make assumed control efficiencies enforceable involving "no permit needed" or "like-kind replacements" decisions was encountered in several source files. ✯✯

- Through its preconstruction permit waiver program, the Permitting Section allows many sources to commence construction prior to permit issuance, but warns the source that if the project is later determined to be subject to PSD

or NAA/Part D review that “EPA” may take enforcement action. The warning appears to place the sole responsibility for resolving any enforcement with EPA rather than the state. While we are generally willing to provide enforcement assistance in these types of situations, we recommend that the language be expanded to include the state enforcement authority as well. ✯

Follow Up

- We recommend that the Permitting Section undertake an effort over the next year to focus on the first five “areas for improvement”. As appropriate, the Permitting Section may re-prioritize the list to concentrate on those areas most critical to the continuing success of the permitting programs.

- We recommend that the Permitting Section review and evaluate the specific findings for Northeast Corn Growers Association, Tracker Marine, and Unilever and take any corrective action that may be necessary.

Section IV

SUMMARY OF MISSOURI TITLE V FEE REVIEW

EPA Region 7 started the Title V Fee review by submitting several questions to the APCP concerning the Title V fee revenue, expenditures, and the accounting system(s). The APCP responded to the questions and provided a detailed demonstration of their system and how the APCP staff uses MOEIS [Missouri Emission Inventory System] to achieve the necessary goal of collecting, accounting, and housing the funds.

The APCP sends out Emission Inventory Questionnaires(EIQ) each January, as the sources submit their emission fee checks. APCP records them in the Missouri Emission Inventory System (MOEIS) fee tracking system. The facility is recorded in MOEIS by the county/plant number. Based on the source category code, the system credits the appropriate revenue account: Title V, Non-Title V, or Phase I utilities. The checks are deposited in the state treasury and the state’s accounting system records the revenue by code in the proper account.

The current emissions fee of $25.70 per ton is set by the MACC. Emission based fees are applied to the following

pollutants: particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon dioxide, lead, and hazardous air pollutants. Missouri state statue provides for the fee collection, and the rule is referenced in each source permit. The fee structure could undergo a change, due to additional revenue of $1.8 million in calendar year 2000 emissions. The phase I utilities will no longer be paying $25,000 per unit. Rather, they will be subject to the rate per ton fee.

The overall finding is that APCP seems to be collecting sufficient fees and accounting for Title V and Non-Title V fees in an appropriate manner. At the current time we have no recommendations or changes to suggest for improving the system.

APPENDIX

List of Files Reviewed

Staff Notes for Individual Permit Files

Appendix A
Missouri Permit Files Reviewed

Title V sources with NSR discrepancies in operating permit application	Aero Transportation Products, Inc., Independence Bruce Hardwood Floors, West Plains EFCO Corporation, Monett Harbison Walker Refractories Company, Fulton Huffy Corporation, Farmington Mead Products, St. Joseph OMC Aluminum Boat Group, Inc., Lebanon Plastene Supply Company, Portageville Waterloo Industries, Inc., Sedalia
Sources showing large increases or decreases in TRI emissions between 1990 and 1997	3M, Columbia A.B. Chance Company, Centralia ICI Explosives USA, Inc., Joplin O'Sullivan, Lamar Teva Pharmaceuticals USA, Mexico TG USA Corporation, Perryville Tracker Marine, Bolivar
Miscellaneous intermediate sources	Townsend Summit (formerly AT&T), Lees Summit Eveready Battery, Maryville Fasco, St. Clair Integram, Pacific Unilever, Jefferson City Vandalia Power Plant, Vandalia
Other sources of interest	Northeast Missouri Grain Processors, Macon Partridge Sand and Gravel, Reed Springs Wilson Trailer Sales, Moberly

Appendix B

Comments on Individual Permit Files

3M [Electronic Products Division], Columbia

Permit Summary...

1998 Five construction permit projects
1999 Two construction permit projects
2000 One construction permit project

3M was selected for a file review based on the company's large decrease in emissions reported to the Toxics Release Inventory (over 150 tons per year since 1990). This type of decrease can sometimes be indicative of "netting" or banking of emissions. The Missouri permits list also indicated that the company seemed to have an unusually large number of projects over a relatively short period of time.

The files indicated that 3M has an active, ongoing permitting process. Over a three year period, 3M undertook eight different projects. In several instances, initial projects appeared to be of pilot scale with follow-up projects resulting in full scale production. Several permits involved refinements of earlier-approved projects. Each subsequent permit included a summary of previously issued permits, assisting both the source and MDNR in project tracking.

Nearly all of the projects, except for a new, small boiler approved in September, 1997, and several new selective cover and plasma coaters approved in August, 1998, appear to have resulted in very small amounts of new emissions. Since the company's potential emissions appear to be far below the PSD major stationary source threshold, and all of the projects were below the significance thresholds, no netting was found. Also, the company made no request to bank its TRI-related emission reductions. It's possible that this repetitive, piecemeal approach, resulting in lots of work for both 3M and MDNR, may be minimized with the Permitting Sections new "no permit required" for projects emitting less than 876 pounds of any criteria pollutant per year.

At least three of the eight projects involved pre-construction waivers. In all cases, the projects were "true minors" and MDNR approved the waivers, consistent with their rules. However, this potential overuse of the waiver approach may be indicative of poor corporate planning and should be a signal to closely watch future growth to make sure that projects are not staggered out of major source review.

A. B. Chance Company, Centralia

A. B. Chance was selected for review because of its large change in emissions reported to the Toxics Release Inventory.

A. B. Chance received construction permit number 032000-010 on February 22, 2000 for a lead solder pot, project number 1999-12-054. This is a modification to an existing minor source.

Emission increases for this project were calculated using AP-42 emission factors using the maximum hourly rate and assumed that the lead solder pot would operate 8760 hours per year.

This was a simple permit with no special conditions.

Aero Transportation Products, Inc., Independence

The Title V permit application states noncompliance with the emission limit set forth in construction permit 0889-0007; the source's statement says an application for a permit amendment is under preparation. Was the construction permit ever so revised?

Cover Sheet, Item 4: Title V Operating Permit

The permit incorporates the requirements of construction permits 0198-010 and 0198-010A.

The permit package for 0198-010 says that production of the '89 permitted products has stopped and that the '89 permit no longer applies since HAPs will be above de minimus and the overall potential for the facility will be greater than major levels.

Bruce Hardwood Floors, West Plains

Permit Summary...

January, 1987	Initial pre-construction permit issued
June, 1988	Construction permit revised to include production limitations, superceding 1987 permit
01/22/99	Final Title V operating permit issued

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. MDNR originally issued a permit to Bruce Hardwood Floors (a subsidiary of Triangle Pacific Corporation) in January, 1987. In June, 1988, the permit was revised to establish enforceable production conditions to assure that the source remained minor for PSD purposes. The production-based conditions generally limited how many board feet of wood that Bruce Hardwoods could process in any given year, thus serving as a surrogate for actual emissions.

In recent years, Bruce was no longer able to meet the board feet production limitation, but believed that it was emitting well below the originally estimated VOC and PM emissions calculated in the original permit application. Consequently, the company asked MDNR to reconsider stating its limits in terms of an emission cap, rather than as a production limitation.

On January 22, 1999, MDNR issued a final Title V operating permit to Bruce. The proposed operating permit contained emission caps for VOC and PM_{10}, rather than production limits, as requested by Bruce. EPA commented on the proposed permit and recommend that the emission caps, alone, were not sufficiently enforceable to assure compliance with the original permit assumptions. EPA recommended that the Title V permit retain the production limitations. In the Permitting Section's "response to comments" document, MDNR decided not to retain the production limitations and finalized the permit to contain only emission caps. Mass balance forms were included with the final permit.

EPA believes it is highly questionable whether a mass balance approach for PM_{10} can be used to verify compliance with an emissions cap. The approach described in the permit makes use of a site specific emission factor -- developed through testing -- that when multiplied against the actual board-feed production rate gives "estimated actual" emissions. However, given the uncertainty in wood quality, moisture, and control equipment performance, it is unlikely that the emission factor approach is suitable to verify compliance with the cap. Since plant wide potential emissions are well below the PSD thresholds, this is probably not a big issue in this case. However, for a company that is close to the PSD major source or significance thresholds, this compliance technique is not recommended.

MDNR further described, in the Title V "statement of basis", that the modified limits in the Title V permit would be re-incorporated into Bruce's construction permit. However, EPA was unable to determine if the preconstruction permit was ultimately revised or not. Based on a conversation during the exit interview, Randy Raymond indicated that the Permitting Section is <u>not</u> changing construction permits in parallel with the operating permit. While the Title V "statement of basis" appears to have taken the correct policy position, it appears that the changes to the construction permit were never carried out.

EFCO Corporation, Monett

Permit Summary...

1991	Originally permitted as deminimis source
10/30/97	Construction permit issued, limiting plant wide VOC and HAP emissions
03/24/00	Final Title V permit issued

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. In 1991, EFCO received an "after the fact" deminimis construction permit from the Permitting Section, limiting VOC emissions to less than 40 tons per year. In 1992, the company reported emissions of over 225 tons; with a potential to emit over 250 tons per year. In 1993, MDNR required the company to perform a HAP ambient analysis to determine if the ambient concentrations were less than those established by the Department of Health. Based on initial modeling, the state determined that the ambient HAP concentrations were unacceptable. The file indicates that MDNR and EFCO had no further discussions until March, 1996, when the state initiated a PSD-related enforcement action.

The company paid a $4,000 penalty to settle alleged PSD violations and agreed to follow through with the HAP ambient monitoring. In October, 1997, the state issued a revised construction permit, limiting VOC emissions to less than 249 tons per year (12 month rolling average), and individual HAPs based on the modeling results. The permit, like others reviewed, contained good record keeping forms. In this case, the forms acknowledged credit for off-site transfers of hazardous waste, but on balance were deficient with the details for making the mass balance calculations.

In March, 2000, MDNR finalized the Title V permit for EFCO. The permit incorporated all of the requirements from the construction permit, including the VOC and HAP caps and associated record keeping.

Eveready Battery, Maryville

Cover Sheet, Item 6: "No permit required" decision

Project involves the replacement of bin vent filters for the ore and graphite filter/receiver system.

DNR's letter to the source cites 10-6.060 and states that no permit is required and that the modification does not involve any appreciable change in either the quality or nature or any increase either in the PTE or the effect on air quality of the emissions of any air contaminant.

Cover Sheet, Item 7: "Like-kind replacement" exemption

Project involves the replacement of the fine mix collection system.

DNR's letter to the source cites 10-6.060 and states that the modification qualifies as a like-kind replacement and that verification will be performed during a routine inspection of the source.

Cover Sheet, Item 8: "No permit required" decision

Project involves the installation of an asphalt [sealant] machine and relocation of an existing machine. Emission estimates: 4A machine, 1.08 TPY of TCE; C machine, 0.38 TPY, naphtha. Calculation sheets are in the file with appropriate submittals from the source.

DNR's letter to the source cites 10-6.060(1)(D)(3) and states that no permit is needed since the max hourly design rate of each machine of HAP will be less than the exempt limit of 0.5 lb/hr.

Cover Sheet, Item 9: "No permit required" decision

Project involves the installation of 2 mix receivers and a baghouse. The projected PM_{10} emission rate based on a baghouse control efficiency of 99.99% is 0.19334 lb/hr.

DNR's letter to the source cites 10-6.060 and states that no permit is required since the projected emission rate is less than the exempt limit of 0.5 lb/hr. The assumed control efficiency of 99.99% has not been made

enforceable. The project in and of itself appears to be subject to PSD permitting unless/until an appropriate control efficiency [or equivalent] is made enforceable.

Cover Sheet, Item 10: "No permit required" decision

Project involves the installation of an exhaust fan in the HCl storage area.

DNR's letter to the source cites 10-6.060 and states that no permit is required since the emissions are already accounted for, the emissions [< 200 lbs/yr] are considered insignificant, the fan allows air to escape from the tank while filling, no new emission created, and emissions are < exempt limit.

Cover Sheet, Item 11: "Like-kind replacement" exemption

Project similar to that listed under Project ID 2000-05-038.

Cover Sheet, Item 12: "No permit required" decision

Project involves the installation of two emergency generators; one on natural gas at 0.3 mmBtu/hr and the other on diesel fuel at 0.5 mmBtus/hr. The source states both units will be run 2 hours per month for testing and whenever needed. Emissions will be < 150 lbs per day of any criteria pollutant. The file does not contain calculation sheets for continuous [8760 hrs/yr] operation.

DNR's letter to the source cites 10-6.060(1)(D)(1)(B) and states that no permit is required since the provision exempts any combustion equipment with capacity < 1 mmBtu/hr heat input.

Cover Sheet, Item 13: "No permit required" decision

Project involves the installation of a vacuum system in the molding room. Based on an assumed control efficiency of 99%, the projected controlled emission rate is 3.02 lbs/yr. In this case, the failure to make the assumed control efficiency enforceable is not of concern.

DNR's letter to the source states that no permit is required in that the projected emission rate is less than the exemption limit of 200 lbs/yr.

Cover Sheet, Item 14: Revision of prior issued construction permit; 0197-020

Action involves the revision of the emission limit in the permit for the cathode molding process.

Emissions for four (4) processes each based on different emission factors but the same pollutant weight % [86.54%] and baghouse efficiency [99%]; 10.77 ton per year, MnO2. The revised permit limits MnO2 to 10 ton per year, 12-month rolling average and contains a monthly emission tracking form which sets forth the assumed emission factors, pollutant content and control efficiency; the source need only input monthly production. It doesn't appear the source was

required to document or justify the assumed values or to post-permit compliance verify those values, initially or from time-to-time thereafter. Regarding the baghouse, the source must operate the unit whenever processes are in use, operate and maintain the unit per manufacturer specifications and track malfunctions, maintenance activities and repairs. Determinations of the ongoing effectiveness of the unit regarding actual control efficiency or resultant emission rate is not addressed by the revised permit. The possibility exists that none of the assumed values will ever be required to be verified by DNR. The "Review of Application" document attached to the permit incorporates by reference various documents into the permit including AP-42, a site survey, the authority to construct application and the emission factors and control efficiency provided by the applicant. This raises a concern regarding the use of [generalized/average/etc.] AP-42 emission factors for source-specific purposes if and when factors in question have not been verified as applicable to the specific source in question. The monthly determinations of MnO2 emissions are based more on assumptions than verified values. These comments generally apply wherever permits have attached monthly emission calculation forms. [NOTE: The assumptions are of concern in that the Emissions Summary table in the permit package indicates that the potential to emit of the pre-modified source has not been determined and the PM_{10} PTE of the application is 12.22 ton per year which is somewhat close to the PM_{10} major modification threshold].

Cover Sheet, Item 15: "Like-kind replacement" exemption

Project involves the replacement of four gas/oil-fired boilers [two @ 16.8 mmBtu/hr, one @ 8.4 mmBtu/hr, one @ 3.4 mmBtu/hr] with three gas/oil-fired boilers [two @ 16.7 mmBtu/hr, one @ 10.4 mmBtu/hr].

DNR's letter to the source, dated 11/19/98, cites 10-6.060 and states the criteria for like-kind replacement [i.e., emission units which do not involve either any appreciable change either in the quality or nature, or any increase either in the potential to emit or the effect on air quality, of the emissions of any air contaminant]. The letter states that verification of the like-kind replacement will be performed during a routine inspection and that NSPS "may apply" to the "new piece of equipment" [emphasis added]. The source's letter to DNR, dated 10/98, notifies the Permitting Section that the boilers were replaced due to age.

The file does not contain any indication that PSD-based net emission change estimates were calculated by the source or DNR. It appears DNR's review was focused on a PTE vs PTE assessment rather than a pre-change actual vs post-change PTE assessment. The file does not set forth the pre-changed source's PTE. The file does not provide an explanation as to why the question of NSPS/Dc applicability was not resolved before issuance of DNR's reply letter. Installation of the new units had already occurred and the NSPS clock may have been ticking regarding the installed units. Question exists regarding the meaning of "new" applied to the installed units; e.g., the units could be "old" units "new" to the source.

Cover Sheet, Item 16: Construction Permit

Project involves the installation of C diaphragm asphalter #3. The VOC PTE for F-41 emission point, which has 2 other asphalters, is given as 3.66 tons

per yr. It's not clear if the emission estimate applies to all of F-41 however it appears the estimate is due to asphalter #3 rather than the total of F-41.

The permit, dated 11/04/98, states that none of the NSPS and none of the NESHAPs apply to the source. The basis for that statement/determination is not set forth in the file. This is a common characteristic wherever construction permits cite applicability or non-applicability of NSPS or NESHAP standards -- the construction or operating permit files do not contain any documentation regarding the decision's basis or who made the determination. If the determination was made by another group at DNR, the other group's communication of that decision to the construction or operating permit group was not found in the permit files. According to the enforcement members of the audit team, they also found no applicability decisions in DNR's enforcement files; where such determinations are expected to be found.

General Comment:

There's no indication in the file which indicates that the above noted changes at the source were addressed for possible agglomeration; it appears that the changes were each reviewed as separate projects which may be DNR's tendency whenever changes are presented by sources for DNR review. The permits, as mentioned above, contain a list of permits issued to the source; we should suggest that equipment addressed by "no permit needed" and/or "like-kind replacement" letters also be included in the listing to allow a quick look at all changes at the source rather than only the permitted changes; of course, the title of the section will need to be changed as well.

Fasco, St. Clair

File documents indicate 1) tracking of in-house activities regarding the Permitting Section's review, 2) record of telephone conversations [RTCs], 3) tracking of staff time regarding the Permitting Sections review, and 4) corrections by staff of data/estimates provided by the source.

A letter from DNR to the source contains seven (7) pages of items in the permit application which need correction or clarification [indicating attention to detail and/or a tendency to not rubber-stamp permit applications].

This file left a good impression of staff accountability, of the considerable amount of time spent by staff on review of received applications and of the Permitting Section's apparent willingness to challenge source-submitted information.

Harbison Walker Refractories Company, Fulton (formerly Dresser Industries)

Permit Summary...

March, 1999	Construction permit issued
11/17/99	Final Title V permit issued

This file was triggered for review based on questions raised in the Title V application. The company indicated that it would have to replace or repair the baghouse on the rotary cooler to be able to certify compliance with the rules. While not directly related to permitting, the company had other recent permitting actions that looked to be of some interest.

In March, 1999, MDNR approved a construction permit for the company covering three new emission points. The permit limited PM_{10} emissions from two of these points [E0051 and E0052] to less than 14.7 tons per year; slightly below the PSD significance threshold. The permit also required Harbison to test each emission point to determine a site specific emission factor to be used to verify the PM_{10} cap. In November, MDNR issued a final Title V permit. Of note, the Title V permit corrected a couple of deficiencies in the 1999 construction permit, including a clarification of NSPS Subpart OOO applicability and the confusion created over the omission of emission point E0053.

As found in other Title V permits, it appears that the Permitting Section completely and correctly incorporated all of the pre-construction requirements into the operating permit. The “statement of basis” described the enhancements made in the operating permit and that the changes would also be reflected in the construction permit. A review of the permit files, though, revealed that the construction permit had yet to be changed at the time of our review. The Title V review also found that a previously issued construction permit from 1992 was no longer valid since the equipment had been removed. The removal of the obsolete permit was clearly explained in the “statement of basis”.

EPA believes it is questionable, though, whether a mass balance approach for PM_{10} can successfully be used to verify compliance with an emissions cap. The approach described in the permit makes use of a site specific emission factor -- developed through testing -- that when multiplied against the actual production rate gives “estimated actual” emissions. However, given the uncertainty in raw material quality, moisture, and ongoing control equipment performance, it is unlikely that the emission factor approach is suitable to verify compliance with the cap. This concern is magnified in this case since the estimated project potential emissions are at or near the PSD significance thresholds. Further, as indicated in the company’s Title V application, they indicate past problems with baghouse performance. Without substantial “periodic” or “compliance assurance” type monitoring of the control device, this compliance technique is not recommended.

Huffy Bicycle, Farmington

Huffy Bicycle was selected for review because their Title V permit application indicated that Huffy requested tighter VOC PTE limits in their operating permit than they received in their construction permit. Our concern was that Huffy was requesting these tighter limits because they discovered that they should have received a PSD permit with the VOC limits that the construction permit had.

Permit 0994-002 issued on August 14, 1994 was reviewed. The file indicated that Huffy Bicycle requested a VOC limit of 240 tons per year

instead of the 249 tons per year limit in the construction permit to create a buffer for small miscellaneous VOC emissions not accounted for in their construction permit.

ICI Explosives USA, Inc., Joplin

Cover Sheet, Item 19: "Like-kind replacement" exemption

The project involves the replacement of an ethylene diamine dinitrate batch reactor. A letter from the source dated 2/29/00 projects a max potential emission rate of 30.8 ton per year @ 8760 hrs/yr. There's no indication in the file that DNR checked the estimate.

DNR's letter to the source, dated 3/20/00, states the new unit will have the same design capacity of the replaced reactor, operation of the new reactor will not increase production capacity, it will not cause an emission increase, and the PTE for the new unit is less than the significant level for VOC. Verification of like-kind replacement will be verified during a routine inspection. The letter also states that NSPS "may" apply to the new unit.

Cover Sheet, Item 20: "No permit required" decision

Project involves the installation of two 5000 gallon fixed roof tanks to contain wastewater having ammonia or nitrates. The tanks stored nitric acid and will be used to store wastewater.

DNR's letter to the source, dated 7/19/99, states no permit is needed in that usage is not expected to increase emissions.

Cover Sheet, Item 21: Construction Permit

The project involves the replacement of a manual packaging system with a new automated ANFO packaging system. The permit package sets forth PM_{10} emission estimates for the new and replaced systems of 6.31 tons per year [based on source-supplied emission factor and control efficiency information] and 3.5 tons per year, respectively. There's no indication in the file that DNR checked the information or estimates.

The permit, dated 1/27/98, states that HAPs are not expected, none of the NSPS/NESHAP regulations apply to the proposed modification, the potential to emit for the new unit is 2.81 ton per year, PM_{10}, and the existing facility is major based on actual emissions.

General Comment

One major impression I developed after review of the first two files is that DNR's permits, review of application documents, formatting, etc., are standardized and as such, an observation that applies to one file generally applied to all files. For example, all permits have a section which address NSPS/NESHAP applicability. An observation that a particular file does not contain adequate documentation regarding NSPS applicability decision making, justification of the need for a 12-month limit, etc., can generally be safely extended to all other files. During my review of files I ignored [and did not

make note of] similarities and searched for exceptions to the standard practice usually to no avail.

Integram - St. Louis Seating, Pacific

Integram permits reviewed included an Intermediate Operating Permit OP1999055 and construction permit 1096-010 issued on October 15, 1996.

The construction permit was for a 4th production carousel which Integram built before applying for the construction permit. Integram was a major source for VOC located in an ozone nonattainment area at the time the 4th production carousel was built. The PTE for VOC's before this project was 127 tons per year. The project had a PTE 42 tons per year of VOC. MDNR limited the source's PTE to 99.9 tons per year of VOC. A Clean Air Act Part D permit was not required and their was no control technology review. The PTE limit was a blanket emissions cap of 99.9 tons in any consecutive 12-month period. The permit included forms the source could use to calculate and track VOC emissions for the spot repair glue. The permit also had example tracking forms for VOC emissions from the mold release, touch-up spray paint, and spot cleaning.. The mold release emissions are the largest for this source with potential emissions of 165.6 tons per year of VOC. The example forms all required emissions to be tracked monthly instead of daily. These forms were not included in the Intermediate permit.

The Intermediate permit limits HAP emissions to 10/25 tons per year. The HAP limit could be interpreted as a calendar year limit. The permit says that HAPS will be tracked monthly based on purchase records. The Intermediate permit does not specify how the HAP emissions are to be calculated.

Mead Products, St. Joseph

Permit Summary...

1992 - 1997	Eight construction permits issued
02/04/2000	Construction permit issued, limiting plant wide VOC and HAP emissions to less than 40 and 10/25 tons per year, respectively
03/28/2000	"No operating permit required" approval

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. MDNR issued eight construction permits to Mead Products from May, 1992 through June, 1997. Of particular interest was a series of three projects approved in January, March, and May, 1995. At the time, Mead was classified as a major stationary source, with potential VOC emissions over 500 tons per year. The three projects in 1995 were each individually permitted, with no apparent review to determine if they were connected.

The combined emissions from the three projects was approximately 57.1 tons per year; well above the PSD significance threshold. Based on a cursory review of the file, EPA would have likely concluded that the three projects -- including one installation of 4 presses and another of 6 presses -- avoided PSD review because of the way the company "packaged" the applications.

This concern was rendered moot when the company received a plant wide emissions cap in February, 2000, limiting VOC and HAP emissions to less than 40 and 10/25 tons per year, respectively. Shortly thereafter, MDNR notified the company that their deminimis emissions potential was sufficient for limiting the company out of the need for an operating permit.

As with other permits involving a mass balance cap approach, the permit could benefit from more specific instructions on how total emissions are required to be calculated. The forms attached to the permit generally provide a good accounting for all HAP and VOCs emitted, but are not specific on how VOC content is to be determined and how the mass balance calculations are to be made.

This file may provide some indication that Title V has side benefits beyond those originally anticipated. As a result of the compliance review conducted for Title V purposes, the source, over a short period of time, re-tooled and re-engineered most of its processes and raw materials to get emissions below the Missouri deminimis thresholds.

Northeast Missouri Grain Processors, Macon

Permit Summary...

03/09/99	Construction permit issued
11/09/99	Construction permit issued

This permit record was reviewed because it is the first ethanol plant to construct in Missouri. Overall, the files revealed some serious concerns; some of which have been resolved, other which have not.

MDNR issued a construction permit for a "greenfield" ethanol plant on March 9, 1999. The permit was based on a plant design of 15-16 million gallons of denatured ethanol per year, with a by-product of 100 million pounds per year of dry distillers grain. The permit limits only PM_{10} emissions from the DDGS dryer and also establishes a restriction that ambient concentrations of PM_{10} not to exceed the 150 ug/m^3 NAAQS at the property boundary. The permit included special forms to track the daily ambient impact based on daily production throughput to the DDGS dryer. More details on the ambient impact analysis are described below. The permit also established once-a-day pressure drop reading for the DDGS baghouse and the fermentation scrubber to help verify that the control performance remains high. Otherwise, no restrictions or work practices were placed on VOC emissions or VOC fugitives from leaking pumps, valves, flanges, or compressors.

NSPS Observations

The permit fact sheet correctly noted that the boiler and tanks would be subject to NSPS Subparts Dc and Kb, respectively, but was silent on

applicability of NSPS Subpart DD, which may apply to the corn storage and handling equipment.

The fact sheet also stated that the plant was not subject to NSPS Subpart VV -- because biofermentation operations are exempt -- and that it would not be considered a chemical processing facility (SIC group 28). No rationale was found in the file for the latter two claims, which are both contrary to EPA policy for ethanol plants. Interestingly, on January 28, 1999, the source questioned MDNR's statements in its hand-written markup of the draft permit, making clear that it should be classified under SIC group 28, and thus should be considered a chemical processing facility subject to PSD at the 100 ton per year threshold. Nevertheless, this change was not made to the original construction permit. Both deficiencies were fixed in the November, 1999, construction permit, following consultation with EPA. The later permit made clear that the facility would be considered a chemical processing facility for PSD purposes – subject to the 100 ton per year major stationary source threshold – and that NSPS Subpart VV would apply to biofermentation operations. The company acknowledged that it agreed with both determinations and would comply accordingly.

Enforceability Observations

VOC emissions from the fermentation process account for just under 50% of the projected VOCs from the facility. The company estimated the PTE based on full source operation, but also considered a scrubber efficiency rated at 95.3% effectiveness. Neither the scrubber efficiency nor a controlled VOC emission limitation were included in the permit. Unfortunately, a minimal drop off in scrubber efficiency, on the order of 2%, could easily put VOC emissions over the PSD major source threshold, and subject the entire facility to PSD. In these types of situations -- where emissions are close to the PSD thresholds -- we believe it is important for the permit to echo the assumptions used to limit potential to emit. We also think it is important to verify that the control equipment operates as prescribed, both initially and ongoing. The permit probably should have required baseline testing for VOC so that the required pressure drop monitor data could be used to verify that the scrubber continues to operate at or above its baseline performance.

A PM_{10} limit was set only for the DDGS dryer, but not for other emission units critical to the modeling, like the grain dryer and hammermill. The permit requires pressure drop monitoring for all baghouses, but specifies no procedures for using these data to determine if the particulate matter assumptions in the application are being met or not. Without baseline test data, for other than the DDGS dryer, it will be nearly impossible to equate the baghouse pressure drop data to any meaningful compliance threshold.

Does the later permit supersede the original permit? It appears so, since the later permit mimics the first in nearly all instances (except for addition of the new equipment and certain corrections), but no supersession language is found either in the permit or review summary.

Applicability Observations

In the original permit application prepared by Northeast Missouri Grain, the company evaluated the potential to emit for both PM and PM_{10} from all

listed emission points. Emissions were estimated at 98.5 and 77.4 tons per year, respectively. Both sets of calculations relied on well documented emission factors from AP-42 and other emission factor guidelines. Yet, in the final permit and review summary, the Permitting Section makes no mention of PM. This appears to be a critical oversight, since PM emissions are estimated to be at or near the major source threshold. Any slight modification, as part of the original project, could easily put the source over the major source applicability threshold, both for PSD and Title V purposes. No explanation is provided on why PM emissions were not considered by the Permitting Section as part of its permit record. We reaffirm that both the state permit rule and the federally approved SIP require consideration of PM for pre-construction applicability purposes.

There appears to be some confusion over whether the source must apply for a Part 70 operating permit or whether an intermediate operating permit is adequate. There was correspondence in the file indicating that the source would apply for an Intermediate permit. However, based on calculations performed by MDNR, Northeast Missouri Grain has a NO_x PTE for fuel-burning equipment in excess of 130 tons per year. This would classify the source as major for Title V purposes. In addition, because the source is classified as a chemical processing facility under SIC Group 28, it would also trigger PSD review. In some handwritten notes provided by the company, Northeast Missouri Grain noted that it was their intention that MDNR limit the fuel use of the facility so that NO_x emissions would remain below the 100 ton per year threshold. Since this limitation was never imposed in the permit, though, it is doubtful that the facility has been properly limited out of Title V or PSD. The company’s permit application and the corresponding permit and review summary continue to conflict, potentially leading to some enforcement risk in the future. If Northeast Corn Growers has not yet submitted a Part 70 application (even though not yet required), we recommend that the Permitting Section contact the company to resolve this conflict before it becomes an enforcement problem. We also recommend that the permit be revised to appropriately reflect the fuel restrictions needed to keep NO_x emissions below the major source threshold, or that Northeast Missouri Grain obtain a PSD permit.

Overall, we have concerns about the true objective of this project. In the original permit application, the company estimated the capacity of the plant at 15-16 million gallons denatured ethanol per year. Following conversion of one beer well to a fermentation unit and installation of a new beer well, the company recently restated the capacity of the plant as 18-19 million gallons per year. This latest revision was apparently accompanied by no corresponding increase in emissions; either from the new equipment or from downstream and upstream equipment. Given the 20% increase in capacity from original application to the latest revision, this seems unlikely. Potential to emit estimates already suggest that the plant may be major for NO_x without appropriate restrictions. Other pollutants, like PM_{10} and VOC, are also very close to the PSD threshold. Any additional projects to enhance the production capacity of the plant could easily put them over the top. We may investigate further to determine if any capacity-building or debottlenecking projects should have been considered as part of the original plant design. We will also monitor compliance with the company’s assumptions used in the permit application and the corresponding permits to assure that the company continues to operate as originally projected. If compliance problems arise, such that

the major source thresholds are exceeded, then some type of PSD enforcement action is inevitable.

Ambient Modeling Observations

The applicant performed a detailed ambient impact analysis for PM_{10}. The review apparently showed the potential for significant impact from the grain dryer (EU0030) and as a consequence the state imposed special limits in the permit to assure that this emission point, along with other points at the source, would not exceed the NAAQS for PM_{10}. Condition 1.A. requires the source to keep daily records of "estimated" impact through the use of a mass balance calculation, by multiplying grain throughput by a special modeling factor and adding to the predicted PM_{10} concentration for all other equipment. Combined, this calculation must show that the 150 ug/m^3 standard is protected each day. In essence, this approach limits the daily grain drying throughput to 608 tons of grain per day, rather than the 874 ton per day potential of the equipment. Overall, though, this approach appears to have many flaws...

- The hourly emission factor used for the dryer in the SCREEN 3 modeling appears to have been "proportionally flattened" to an annual average; based on a projected number of operating hours of 2,308-3,000 hours per year. As a consequence, modeled emissions from this "critical" unit are likely underestimated by a factor of three.

- The screening modeling performed, and the subsequent ambient-based, surrogate production limit in the permit, do not appear to have considered the PM_{10} background concentration in and around the source. Data for Monroe County, not far from Macon County, shows daily maximum background concentrations of 33 to 54 ug/m^3. Some representative background concentration should have been accounted for when allowing a source to emit up to the NAAQS.

- The modeling appears to have focused only on the NAAQS, with little or no attention to increment. The Class II PM_{10} increment for this area is 30 ug/m^3, assuming that the baseline has been triggered. The new plant, though, projects an overall impact of over 113 ug/m^3; or nearly four times the increment. While not a PSD source (although this is also of question as described above), it seems reasonable that if screening modeling predicts concentrations well above the increment level then refined modeling should have been performed. Refined modeling may have shown lessor impacts, but it is doubtful that it would show such a significant reduction that the impacts would fall below the allotted increment. This suggests that tighter PM_{10} emission limitations would have likely been required; in particular for the grain dryer, DDGS dryer, and the hammermill and belt scale.

- Unlike other PM_{10} emission points which were modeled based on AP-42 factors, the DDGS dryer [EU026] was modeled using a "conservative" process weight rate emission factor. The permit establishes the process weight rate as the enforceable PM_{10} limit for the DDGS dryer, so this is the proper input to the model. Based on the results of the screening modeling, though, this unit has the highest impact of all emission units and -- alone -- is

predicted to exceed PM_{10} increment levels. Based on the increment concerns expressed above, it is likely that the permit should have specified a much lower emission limitation for this unit.

- Other "critical" units, including the grain dryer and the hammermill, are of concern as well since they were modeled based on controlled AP-42 factors. These factors, while not useful for compliance purposes, are likely to be somewhat representative of average actual emissions from this type of equipment. The modeling shows that these units, too, are very close to the increment level. Combined, they are well over. Therefore, it appears that controls would have to perform substantially better than those used on a similar AP-42 unit.

- The screening modeling does not appear to have considered fugitive emissions from haul roads. Given the short stacks of much of the equipment, it is possible that overlapping impacts from road dust and process equipment may even further aggravate conformance with the increment.

Overall, it appears that the "conservative" screening modeling performed by Northeast Grain Processors may not be protective of either the PM_{10} NAAQS or the increment. Whether ultimately found to be a PSD source or not, we believe that increment consumption should be evaluated where screening modeling (and likely refined modeling) indicate a substantial likelihood of problems. We continue to support the Permitting Section's use of screening modeling for these kinds of projects and understand the resource concerns associated with refined modeling. However, in this case we recommend that the Permitting Section re-evaluate the modeling and modify the permit, if necessary, to assure that critical PM_{10} emitting units are properly limited to avoid any modeled exceedance of the NAAQS and increment.

112(g) Observations

It wasn't clear from our review whether the Permitting Section considered the 112(g) [or 10 CSR 10-6.060(9)] implications for this new ethanol production facility. The permit fact sheet indicates that "HAP emissions are not expected from the proposed equipment", but other information in the permit record indicates that such facilities may emit methanol and hexane, both listed HAPs. Test data, included in the permit record, for a similar facility in Minnesota indicated that methanol emissions may be present. The source application also notes that hexane may also be emitted from the bio-digester. Since the facility was constructed after the 112(g) applicability dates, it would have been worthwhile to see an applicability or nonapplicability analysis specific to the equipment being installed. Absent this showing, it is uncertain whether 112(g) applies or not.

Specific Recommendations

- We recommend that the Permitting Section follow-up on the question of NSPS Subpart DD applicability for the corn storage and handling equipment.

- We recommend that the Permitting Section follow up with Northeast Missouri Grain to determine whether HAP levels should be controlled under 112(g).

- We recommend that the Permitting Section re-evaluate the modeling and modify the permit, if necessary, to assure that critical PM_{10} emitting units are properly limited to avoid any modeled exceedance of the NAAQS and increment.

- We recommend that the Permitting Section resolve the PSD and Title V applicability concerns by reopening the permit to:
  - clarify restrictions on fuel use (NO_x)and particulate matter (specifically PM) emissions
  - establish testing requirements for all equipment with a potential to emit that accounts for 25% or more of the potential to emit of the facility (e.g. PM, PM_{10}, NO_x, and VOC for the DDGS Dryer, NO_x for the Boiler, and VOC for the Fermentation Scrubber) to provide baseline comparison to control equipment operating parameters. Without such testing, the measurements taken from the control equipment are likely not meaningful for compliance certification purposes.

OMC Aluminum Boat Group, Inc., Lebanon

Permit Summary...

05/09/97	Title V permit application filed
09/22/97	Construction permit issued
12/03/98	Title V permit issued

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. The original Title V application described the installation of a spray booth in 1989, but made no mention of the construction permit for this project. The Title V application also noted that the company was seeking a plant wide cap to limit its VOC emissions to below 250 tons per year.

The file revealed that the Permitting Section issued an “after the fact” preconstruction permit to the facility limiting its plant wide emissions to less than 249 tons per year. This cap applied to all equipment at the installation. Since overall criteria emissions were limited to less than major source status, no further review was done on the original paint booth installed in 1989. The cap seemed to resolve the question raised during the Title V permit application review.

The Title V permit properly incorporated the cap limits for both VOC and HAPs. Both the pre-construction and operating permits included detailed mass balance record keeping forms to assist in the accounting of VOCs and HAPs. While the forms were comprehensive, neither the construction or operating permits specified the details for making the mass balance calculations. Nor did either permit specify how the various emissions factors for coatings and solvents were to be determined. For example, it was not clear from the permit whether the company was allowed to receive any credit for off-site waste

disposal of its VOC or HAP materials. It would have been very helpful to see an explicit equation, along with a description of each term, or a detailed explanation of the methodology to be used to make the VOC and HAP calculations.

The file contained the results of ambient screening modeling for six HAPs performed by the Permitting Section. Modeling results indicated that the concentration of HAPs would be below the Permitting Section's action level of 10 times the ambient air level (AAL).

O'Sullivan, Lamar

Cover Sheet, Item 17: "No permit required" decision

Project involves the installation of a routing unit. The applicant set forth the following: 294 bd ft/hr, an emission factor of 0.1324 lb/1000 bd ft and a control efficiency of 99.35%. DNR applied an emission factor 0.315 lb/1000 bd ft and estimated potential emissions not considering control equipment as 0.09 lb PM_{10}/hr.

DNR's letter to the source, dated 5/03/00, cites 10-6.060(1)(D)(3)(A) states no permit is needed in that at the max hourly design rate of 294 bd ft/hr, the potential emission rate is less than the exempt rate of 0.50 lb/hr.

Cover Sheet, Item 18: Construction Permit

Project involves the installation of a laminating machine at an existing wood furniture plant. To its credit, DNR informed the source in a letter dated 7/20/99 that MHDR [i.e., max hourly design rate] may not be determined using annual through put data; DNR suggested that the equipment's manufacturer be contacted for the machine's MHDR. DNR needed the MHDR for PTE purposes. The machine replaced an existing machine; it doesn't appear DNR treated this change as a like-kind replacement. HAPs were addressed by DNR with the conclusion that MACT JJ would not apply to the source in that the source is not a major HAP source. The source stated in a letter dated 4/23/99 that the new machine will have a higher production rate [205,705 gal resin/__] than the unit to be replaced [80,404 gal resin/__] but that the resin to be used in the new machine will have a lower VOC and formaldehyde content than that used in the to be replaced unit. The file does not indicate that the source was asked if the new unit would be able to process the resin previously used or a higher VOC content resin; also, the permit does not restrict the characteristics of the resin to be used. Thus, the source's PTE [4.96 TPY] estimate for the new unit is questionable but this may be a moot point in that the source appears to be a nonmajor source. DNR's "Review of Application" document says the application's emissions will be 11.38 TPY which differs from the source's estimate of 4.96 TPY. The file is not clear as to how the 11.38 TPY estimate was derived. Application of a revised MHDR [53.91 vs 34.3] doesn't account for the difference in the projected annual emission increase estimates.

The permit issued on Sept 20, 1999, contains a standard condition not previously notice by the auditor. The 1st sentence of the condition states that the specifications/conditions listed in the application, the permit and the project review document are incorporated as part of the permit. However,

the 2nd sentence of the condition may restrict the applicability of the entire condition to the specifications/conditions directly related to control equipment. If so, then the other specifications in the application [e.g., relating to paint VOC content, production rate, etc.] may not be incorporated into the permit if that's DNR's intent. The permit package cites NSPS nonapplicability; the file is not clear as to who at DNR made that determination.

A letter dated 7/21/99 to the source allows constructions activity prior to permit issuance. It basically states that if PSD or NSR Part D review is later determined to apply the company may be subject to "EPA" enforcement action. The reason the enforcement burden is placed only on EPA is not clear; the statement if a standard statement used by DNR should be revised to place enforcement action priority on DNR rather than on EPA.

Partridge Sand and Gravel, Reed Springs

Cover Sheet, Item 22: Construction Permit

NOTE: Only the construction permit was reviewed for purposes of assessing the adequacy of permit conditions/discussions. The permit was randomly picked from the most current notebook of construction permits across from Raymond's office.

Findings/suggestions/questions follow:

The permit [072000-004], issued 3/29/00, approves a new plant with a washing rate of 75 TPH.

The cover page approves construction of the source "under the authority of RSMo 643 and the Federal Clean Air Act". What authority has been granted Missouri, or any state, by the federal CAA? Rather than specifying CAA authority, why not cite "under authority granted by the EPA and of RSMo 643"?

Regarding Standard Condition 1, a deadline has not been specified for the notification of failure to begin construction within two yrs of the effective date of the permit; the same comment applies regarding suspensions greater than one year. As written, the second sentence's intent will be difficult to enforce in that the deadline for each notification is not specified.

Regarding Standard Condition 4, why isn't the application [and other associated documents] also mentioned if those documents may contain provisions/proposals/etc., intended to be enforceable by DNR?

Regarding Standard Condition 6, what if the mentioned documents contain conflicting information [e.g., control efficiency, EF] ... which applies and/or must be met if/when the permit does not specifically address the matter? Maybe include a statement that the most stringent of the conflicting items applies until DNR formally resolves the matter.

Regarding Site Specific Conditions 1.B.1 and 2, they are not equivalent. What's the basis for this non-equivalence? Based on a 24 hr/day operating schedule [which the permit allows], the per 4 hour water application rate should be 26 gallons rather than 21 gallons to equate a quarter inch daily rain fall over a 1000 sq feet area.

Regarding Site Specific Condition 1.C.1, the frequency of the haul road surface area estimating is not specified; as such, the provision is not enforceable from a practical standpoint. Maybe require a new estimate each time the unpaved haul road configuration changes.

Will there be no emissions off the paved haul roads at the site? If no such roads, the permit is silent as to what will be required [e.g., permit re-opening] if/when unpaved roads are paved.

Regarding Site Specific Condition 1.C, why not also require reporting or highlighting sections of roads which were not wetted per the conditions of the permit?

Regarding the "Emissions/Controls Evaluation" section of the "Review of Application" document attached to the permit, DNR's use of AP-42 emission factors has not been justified for this particular source. If justified, each emission factor "rating" should be specified for informational purposes.

Regarding paragraphs 2 and 3 of the "Emissions/Controls Evaluation" section of the "Review of Application" document attached to the permit, many assumptions are mentioned which have not been justified as applicable for this particular source. As such, the PTE estimates given for the source are questionable.

The permit package mentions Partridge Sand & Gravel many times. The permit is silent regarding transfer of ownership of the source. Will the new owner need to get a new permit for the source? Will the requirements of the permit automatically transfer to the new owner? Will proposals made in the application by Partridge still be binding on the new owner if the permit does not specifically impose the proposals?

The "Ambient Air Quality Impact Analysis" of the "Review of Application" document states a nomographed modeled impact estimate of 149.95 ug/m^3 for PM_{10} against the 24-hr NAAQS of 150 ug/m^3. The estimate does not appear to include a background concentration; if so, it appears the source will cause or contribute to a violation of the PM_{10} NAAQS. DNR approved the project. Why wasn't more complex modeling studies required? The impact estimate appears to rely in part on 99% and 90% effectiveness control regarding, respectively, the wash system and haul roads.

Plastene Supply Company, Portageville

Plastene Supply Company was selected to review because their Title V permit application indicated that they had built several paint spray booths without construction permits. Plastene also requested to use TVEE Method 2 for periodic monitoring for opacity. We wanted to make sure that this method was not used in the operating permit.

A review of the operating permit file showed that TVEE Method 2 was not used for opacity periodic monitoring. A requirement for equipment to be labeled in construction permit 1298-009 was not included in the operating permit.

Plastene received construction permit number 1298-009 dated November 12, 1998 for four "as built" paint booths. These booths were installed in 1986. MDNR fined Plastene $50,000 in a 1999 settlement agreement with Plastene for this violation. Plastene is an existing major source with actual VOC emissions greater than 250 tons per year. The construction permit included the following special condition:

> Plastene Supply Company shall not discharge into the atmosphere from the four (4) spray booths using HVLP spray guns VOC's in excess of 40 tons in any consecutive 12-month period.

To avoid PSD, the limit should have kept the emissions below 40 tons instead of equal to 40 tons. The permit required monthly records and did not specify how to get the VOC content of coatings. HAP emissions were modeled for this construction permit. The permit also created a HAP limit. The HAP limit also required monthly records and did not specify how the HAP content of the coating should be determined.

Construction permit 1198-008 issued on September 18, 1998 for a new 10.5 mmBtu per hour boiler correctly stated that the boiler is subject to 40 CFR Part 60 Subpart Dc.

TG (USA) Corporation, Perryville

TG was selected for review because of its large change in emissions reported to the Toxics Release Inventory. TG has been issued six construction permits in a relative short period of time. TG is a major source for PSD with potential VOC emissions greater than 250 tons per year.

Project Summary			
	Date Applied for Permit	Date Permit Issued	VOC PTE
1	11/14/94	4/25/95	0.4
2	9/5/95	12/20/95	29.5
3	11/22/95	2/28/96	1.2
4	4/22/96	7/19/96	8
5	11/6/97	1/29/98	12.6
6	6/24/98 "As Built"	9/3/98	9.3

Each of these projects had a potential to emit less than the significance threshold. However, these projects were permitted within a short period of time from each other. We are concerned about sources splitting projects into

multiple permits so that they appear to not be significant. We recommend that sources that submit multiple permit applications over a short period of time, as in the case here, be looked at to make sure they are not trying to avoid PSD or NSR with sham permits. We did not have time to review these projects to determine if PSD should have applied in this case. Also, it was hard to tell from the application where the emission factors came from. Furthermore, some of the annual emission rates reported in the review summary did not equal the product of the hourly rate and the number of hours the source planned to operate. We were not able to determine from the files why a lower annual rate was used in the review summary.

The construction permits issued in 1998 state that 40 CFR Part 63 Subpart T does not apply to the degreasers. These degreasers use Aktrel Solvent but it was unclear from the file what this solvent is composed of. Therefore, we could not confirm that this applicability determination is correct.

Teva Pharmaceuticals USA, Mexico

Teva Pharmaceuticals was selected for review because of its large change in emissions reported to the Toxics Release Inventory. Construction permit files for two permits/projects were reviewed.

Project number 007-0040-013 was for the installation of two reactors and one bulk storage tank to manufacture bis-trimethylsilylurea (BSU). Construction permit 0198-024 was issued for this project. This was a modification to an existing source. Material from the two new reactors are used in the "Cephalosporin-G" process. The file referred to the "Cephalosporin-G" process as being new. There was no indication in the file that this project was considered as part of the "Cephalosporin-G" process project. The permit did require Teva to test to quantify the VOC from the BSU rectors. Since there was not VOC limit in the permit it appeared that the test was to verify information supplied by Teva in the application on the emissions from the reactor. The estimated VOC emissions from this project is 0.0134 tons per year.

Project number 007-0040-014 was for an amoxicillin trihydrate manufacturing facility. All the equipment for this project was transferred from Teva's New Jersey manufacturing site. Construction permit 0198-034 was issued for this project on January 20, 1998. The review summary says that Teva is subject to 40 CFR Part 63 Subparts H and I but the file did not say if the source is major for HAPS. The permit requires the use of a carbon absorption system with a breakthrough monitor. The permit requires the carbon adsorption system to be maintained to minimize excess emissions and defines excess emissions and detecting a breakthrough. The permit also requires annual verification of control efficiency but the permit does not specify what efficiency is required. The permit may have intended Teva to verify the control efficiency specified in the permit application but the permit application is not specific on the averaging time of the control efficiency. The review summary stated that tanks T-008, T-010, and T-014 are subject to 40 CFR Part 60 Subpart Kb. However, there was no information in the file on when these tanks were built. It was not clear that these tanks are subject to Kb since the tanks were being moved from New Jersey.

Tracker Marine Bolivar Plant, Bolivar

Tracker Marine was selected for review because of its large change in emissions reported to the Toxics Release Inventory. Permit 0599-006 issued on April 23, 1999 was reviewed. This permit was for an "as built" paint booth. This source is not in a nonattainment area.

This permit referenced permit 1196-010 which was issued in November of 1996. This permit was also an "as built" and limits Tracker's facility wide VOC emissions to 40 tons in any consecutive 12-month period. The 1999 construction permit file says that permit 1190-010's 40 ton VOC cap was changed in an operating permit to a 100 ton per year limit. There is no record in the file for permit 1196-010 that it has been changed. Also, no operating permit has been issued to Tracker. It is not clear if permit 0599-006 revises the VOC limit.

Tracker also has limits on HAPS to keep Tracker a minor source for HAPS. It appeared that MDNR considered 112(g) when this project was reviewed and calculated a HAP PTE of just over 25 tons of HAPs per year. MDNR correctly determined that the source is not subject to 112(g) since the source has facility wide HAP limits to keep the source minor. However, MDNR has discovered that Tracker has violated its HAP limits. Therefore, Tracker has now applied for a Part 70 permit. The Part 70 application incorrectly says that currently there are no plant wide permit conditions and the permit does not propose any plant wide permit conditions. It appears that Tracker must either get a 112(g) permit or limit the new paint booths to less than the major source threshold since they will be a major source for HAPS.

It was not clear where the emission factors for NO_x and PM_{10} came from.

Townsend Summit (formerly AT&T), Lees Summit

Cover Sheet, Item 5: Intermediate Operating Permit

Standard permit; as such, standard comments.

Unilever Home Personal Care, Jefferson City

Unilever's Intermediate operating permit issued on June 1, 1999 was reviewed. This permit limited SO_2 emissions to 95 tons in any 12 month period. SO_2 emissions at this source is from the combustion of oil. The permit requires Unilever to analyze the fuel oil on an annual basis for the percent sulfur. The permit does not specify what method to use to analyze the oil. There is no requirement for the source to install a fuel meter so the amount of fuel used can be determined.

Also construction permit 1100-0009-007 issued on August 16, 1996 was reviewed. This permit was for a line to manufacture Dentifrice toothpaste. This was an "as built" permit. MDNR issued Unilever a NOV on November 4, 1994. Unilever's SIC code is 2844 and is not located in a nonattainment area.

The existing source had a PTE 113 tons per year of SO_2 making the source major for PSD. This construction project had a potential to emit 67 tons of VOC per year. It appears that Unilever's SO_2 PTE should have been limited in this construction permit to keep the source out of PSD.

Vandalia Power Plant, Vandalia

Vandalia Power Plant's Intermediate operating permit was reviewed. This was a simple permit with nothing noteworthy discovered.

Waterloo Industries, Inc., Sedalia

Were EP26 and EP28, apparently mentioned in the source's Title V permit [and/or application], installed w/o proper construction permits.

Cover Sheet, Item 2:

A construction permit for emission points 15-18, 33 as well as **emission points 26 and 28** [consisting of 42 natural gas fired infrared heaters] was issued on 7/17/99. The projected PTEs for the various criteria pollutants are each less than 1.6 TON PER YEAR. The permit package contains an ambient impact analysis

> Ambient Impact Analyses: According to Refaat, ambient impact analyses are required by state rule. The emissions increase threshold are the significant increase thresholds for criteria pollutants; the Permitting Section is developing thresholds for HAPs. Each portable is apparently subjected to an ambient impact analysis [apparently because of their changing surrounding situation].

A construction permit for an EDP coating tank and a bake oven was issued by DNR on Aug 1, 1997. The permit and an attached document entitled "Review of Application for Authority to Construct and Operate" which constitute the permit package contain a review summary section, an applicable regulations section, a listing of past permits issued to the source section and a project description section which are typically concise and informative. The permit notation system is somewhat clever if not simple [e.g., 0897-012 for a permit issued around 8/97]. The permit package also contains a HAPs emissions impact analysis. This construction permitting action also set forth a plant-wide VOC emission limit of 248.5 tons, 12-month rolling allowable. The limit basically subsumes 112.18 tons for emission points 3-11 and 136.32 tons for emission points 24-42 [NOTE: I could not determine why the 112.18 tons was tied to emission points 3-11 as opposed to emission points 3-9; see the following paragraph]. The permit sets forth a blanket emission limit as opposed to restrictions relating to production, solvent content, etc. EPA policy allows blanket limits for painting operations if daily, rather than longer period, record keeping is required. The file document do not indicate that the source was required to justify its need for a 12-month limiting period. DNR's actions regarding these matters are not consistent with EPA policy. The permit also does not set forth clear provisions regarding applicability of the 12-month limit during the initial 12-month period.

NOTE: Except where otherwise noted, each deficiency noted above is common to other permits which have a 12-month emission limit.

A construction permit [1294-003] issued on 11/27/94 [and/or 12/02/94?] for new paint-related systems emission points 3-9 establishes a VOC emission limit of 112.18 tons. The permit requires a log of monthly VOC emitted and of VOC emitted on a 12 month rolling period. Although implied, the permit does not specifically state that the 112 ton VOC limit applies over a 12 month rolling period. The permit package contains a table which sets forth in easily understood format the existing source's PTE [143 TPY, VOC], the new equipment's PTE [112 TPY, VOC], the project's net emissions increase [88 TPY] and the revised PTE of the source after the modification. The permitted equipment replaced equipment at the source. The permit states that none of the NSPS or NESHAPs will apply to the facilities; the statement does not set forth the basis for the decision. The permit package contains an ambient impact analysis section (because, as explained by DNR, the PTE increases from the source will be greater than the de minimi level); modeling was done for the HAPs but regarding other pollutants, the Permitting Section simply states that the impacts are not expected to adversely affect the ambient air quality.

A construction permit was issued on Aug 24, 1990, for a maintenance paint booth. Emission restrictions were set forth for paint and for thinning solvent in terms of allowed gallons per year and VOC content. The permit imposed monthly record keeping.

Cover Sheet, Item 3: Title V Operating Permit

For paint booths and EDP coating process.

The file contains discussion/correspondence between EPA and DNR and between EPA and the source regarding NSPS/Dc and Region VII's reduced record keeping/reporting requirements. EPA/VII granted reduced record keeping requirements to the source on Aug 2, 1999. The Title V permit issued by DNR on 12/30/99 contains those reduced record keeping requirements.

Wilson Trailer Sales, Moberly

Permit Summary...

01/17/96	MDNR issued "No Permit Required" notice
08/20/98	Company notified MDNR that permit required... based on new estimates
09/02/98	MDNR notified company to file construction and Part 70 applications, along with EIQ
01/25/99	"After the fact" construction permit issued

The Wilson Trailer file was randomly selected for review.

In early 1996, Wilson Trailer constructed a new facility without a permit. Wilson constructed based on a determination by MDNR in January, 1996, that no construction permit was required because the potential to emit for the facility was below deminimis levels. In August, 1998, Wilson notified MDNR that, based on a consultants review, they believed the facility was not deminimis and that a permit was required. The consultant noted that since the

source had not received a permit with limits necessary to validate the PTE calculations, the PTE would be much higher than originally projected. Shortly thereafter, MDNR re-evaluated the project and determined that a construction permit should have been required. The state also notified Wilson that they would have to submit a Part 70 operating permit application and emission inventory questionnaire (EIQ).

In January, 1999, MDNR issued an "after the fact" construction permit. However, the permit contained no restrictions -- other than the standard conditions -- and no record keeping. The problem with this approach is that, absent detailed records, it could be nearly impossible to verify whether the source continues to remain below the PSD major source thresholds. The final PTE estimate [69 TPY VOC and 77.1 TPY HAPs] was premised solely on information listed in the application and essentially relied on a bottleneck in the trailer production line to limit emissions. Any time surface coating is involved, there are a lot of assumptions that can be made. Interestingly, none of these important limitations – such as "production is limited to two shifts" or "production is limited to 12 trailers per day" -- were included in the permit. These assumptions can easily change over time; maybe even to the extent that PSD could be triggered. A better approach in this case would have been to use an emissions cap similar to that used in other VOC projects. That way, the company must maintain adequate records and perform a mass balance calculation to show that they remain below the cap.

Even though the permit contained a standard condition that the "permit application is incorporated by reference", it remains unclear exactly what this means. We understand MDNR's desire to have sources build and operate the way they document in their application. However, when push comes to shove, can the state and EPA really distinguish whether the source is in compliance with the application or not? If a source indicates that it will operate two shifts a day, are they in violation if they only operate one? If they use different coatings or different application equipment -- say with a different transfer efficiency coefficient – is that a violation? What if the source doesn't exceed its original potential to emit estimates but makes other physical changes? It is best not to have this confusion. Therefore, we recommend that if major assumptions are used to limit potential to emit, then they should highlighted in the permit as enforceable conditions.

The state ultimately decided to take no enforcement response; presumably because of the equity problem raised by their prior "no permit required" assurance. While this may have been the appropriate decision in this case, we urge caution that "no permit required" determinations should not be used to shield sources from enforcement, whether the state concurred with the sources' erroneous assumptions, or not.

On the plus side, MDNR performed a HAP evaluation for three pollutants. All were shown to be below the state's acceptable ambient level thresholds.

[End of Individual Source File Comments]

Chapter V

COMPLIANCE AND ENFORCEMENT

TABLE OF CONTENTS

Section I

INTRODUCTION

Purpose of the File Review

The purpose of the air enforcement review was to assure that air violations are being identified by MDNR, that significant violations are being reported to EPA, and that timely and appropriate guidelines for enforcement are followed. The review also included an overall assessment of the air enforcement program based on the recent EPA Region VII decision to resume reviews of all state media programs.

Staff

The EPA enforcement review team included Lisa Hanlon, Tony Petruska, and Mike Bronoski, all representatives of the Air Permits and Compliance Branch. Steve Feeler, Air Enforcement Section Chief, was the primary representative for MDNR's air enforcement program. The Data Management review team included Earlyne Hill from EPA and Nikki Grimshaw from MDNR's administrative section.

Section II

METHODOLOGY OF REVIEW

Meeting Preparation

Prior to meeting with the State, several elements were developed to assist in the review. A list of source files to be reviewed was sent to MDNR approximately two weeks prior to the review to allow the State time to gather the file information at one central location. A total of 36 files were reviewed during the audit. The sites were randomly selected from the areas of jurisdiction of each of the six Regional Offices (ROs) within the State. Six source files were reviewed per RO. The sources selected were mainly facilities that were classified as major sources which were subject to significant Clean Air Act requirements such as NSPS, NESHAP, MACT, or PSD.

The AFS database was used to pull retrievals to assist in the selection of sources for file review. Summary reports from

the PC-CEMS database generated by EPA were utilized in the file review.

Entrance Meeting

Following the kick-off meeting with all EPA and MDNR personnel, the EPA enforcement team met with Steve Feeler which allowed the team participating in the review of the enforcement program to become familiar with the air enforcement program overall. To direct the discussion, a list of questions (Appendix 1) was supplied to MDNR prior to the meeting. This allowed the review team to ask questions and to provide an opportunity for both agencies to exchange information.

File Review

To assist with the file review, a checklist was developed by the EPA. This checklist was filled out for each file reviewed. A copy of the checklist is included in Appendix 2. The focus of the review primarily covered the time period starting with calendar year 1998 through the date of the review. Pertinent documents which were developed outside of this time frame, but still had a current regulatory impact on the source, were included in the review as well. If relevant information was found during the review, copies of this material were made and attached to the checklist.

Exit Meeting

It was communicated to MDNR that the two significant issues found in regard to review of the air enforcement program were the deficiency of the Inspection Forms and the failure to document in the files follow-up actions taken. The lack of a penalty policy was also related to be a moderately significant issue for the state.

Section III

OVERVIEW OF ENFORCEMENT PROGRAM

Organizational Structure

The Missouri Air Enforcement Program consists of the central office Enforcement Section and six Regional Offices (ROs) distributed throughout the state. All legal support is provided by the Attorney General’s Office (AGO). The RO staff is

comprised of multi-media inspectors, while the Enforcement Section consists of enforcement officers and stack testers. There are currently two vacancies in the Enforcement Section at APCP, and the allocated number of positions appears to be adequate. Staffing levels of the Regional Offices are unknown. The staff person responsible for the AFS compliance data system is located in the Administrative Section, rather than the Air Compliance Section.

Inspections

All inspections are performed by the ROs. Approximately 1600 inspections are performed throughout the state annually. All major sources in non-attainment areas are inspected annually, while all other major Title V sources are inspected at least bi-annually. All inspection reports are forwarded to Steve Feeler, who forwards the enforcement cases to Abbie Stockett, who logs and distributes the cases within the Enforcement Section. The enforcement officer will proceed with case development with input solicited from the inspectors who discovered the violations.

Complaints

All complaints are taken by the Regional Offices. Any complaints received by the Enforcement Section are forwarded to the Regional Offices. The Regional Offices attempt to follow-up with all complaints with a few days. Often, an inspector will send a follow-up letter to the complainant with any findings after a complaint is investigated.

Enforcement Procedures

Once an inspector identifies a violation, he or she may issue a Notice of Violation (NOV) or a Notice of Excess Emissions (NOEE) at the time of the inspection. The inspector may also issue NOVs or NOEEs after returning from the field. Approximately 1000 NOVs were issued in 1999, with only 90 of those High Priority Violators (HPVs). All inspection reports are directed to Steve Feeler, who determines if an enforcement action is necessary. Steve directs all enforcement cases to Abbie Stockett, who assigns cases to staff on an availability and expertise basis. Without a formal penalty policy, all penalties are determined by Steve based on the gravity of the violation and experience. When the APCP attempted to set an internal penalty policy, the AGO struck it down, claiming that a penalty policy would have to go through rule making. Once an NOV or NOEE is

issued, APCP will frequently send a “Request for Settlement” offer letter to the source. This allows APCP to bring the facility back into compliance in an expeditious manner. Once a preliminary settlement has been reached, a settlement agreement (as with all routine enforcement actions) must be drafted by the Attorney General’s Office. If a settlement cannot be reached, an enforcement case is placed on the Missouri Air Conservation Commission agenda to authorize referral to the AGO, which can significantly delay the resolution of the case.

Section IV

SUMMARY OF FINDINGS

Identification of Facility Violations

One noteworthy aspect of Missouri’s enforcement program is that all inspection reports and potential violation issues are directed through Steve Feeler, the Enforcement Chief. This provides good consistency for all enforcement actions and ensures that the program runs smoothly. Also, when a RO issues an NOV or NOEE, a letter usually accompanies the notice with an explanation of the violation. This helps facilities address the violations in an expeditious manner. When a violation is found by the RO and forwarded to Steve, Steve then solicits input from the inspector discovering the violation to determine the extent of the violation. This information can be invaluable in choosing the most appropriate course of action for a source. The Enforcement Section also utilizes a wide assortment of tools to help identify and target inspection candidates.

One significant deficiency our review found is the inadequacy of the inspection reports. These reports indicate little, if any, detail surrounding the compliance of a source. There is no indication of what requirements a facility must adhere to on the inspection forms, so any potential violations found must be hand-written by the inspector in the “Comments” section of the form. It is impossible to tell if an inspector has verified all of the permitting and compliance requirements that a facility is obligated to on the inspection form. This lack of information can greatly reduce the quality and effectiveness of Missouri’s enforcement program.

MDNR Response

The regional offices are not under our direct control. However, we are willing to modify our inspection report format. We would appreciate a sample inspection report, if EPA has one available.

Of the 39 files reviewed (Appendix 3) by the enforcement team, 5 violations were identified as being potential High Priority Violators (HPVs). However, since the source classifications on the inspection reports are not consistent, it is difficult to determine whether these sources are major sources and thus HPVs. These facilities are:

Briggs & Stratton (Poplar Bluff) - A July, 1997 stack test exceeded the MACT Subpart N limit. A 2/6/98 settlement agreement required compliance prior to 4/98 retest. No retest is in the file. No penalty was assessed and facility was not added to HPV list.

University of Missouri (Rolla) - A 6/6/00 inspection identified that this facility was not complying with the monitoring requirements in their Title V Operating Permit, which had been issued 5/9/00. The monitoring violations include: failure to do visible observations beyond property boundary, failure to perform Methods 9 and 22 on emission points, and failure to keep records.

Lee Jeans (Lebanon) - An NOV was issued for failure to comply with “Special Condition 1" of permit #0394-002, which requires the company to notify APCP of any change in type or quantity of waste burned. A preliminary settlement was reached for a penalty of $4,000 and shut down of the incinerators. APCP requested AGO to prepare the settlement agreement on 11/24/98, but no further documentation is found in the file.

Lee Rowan (Jackson) - Violations of Part 63 Subpart N (Chromium Electroplating) for failure to obtain an operating permit and failure to make initial notification and meet initial compliance dates. A Letter of Warning was sent, but no follow-up documentation is found in the file.

Rival (Sedalia) - Violations of Part 63 Subpart T (Vapor Degreasers) for failure to submit initial notification and compliance reports. A Part 70 permit was issued by the Permits Section in March, 2000, but no semi-annual MACT reports are in the compliance file. No further follow-up documentation is found in the file.

MDNR Response

Agree. We are proposing to change our classification system to be based upon Operating Permit classification.

Timely and Appropriate Enforcement Response

One very positive attribute of Missouri's enforcement program is that Missouri does not hesitate to take an enforcement action against a facility when it is warranted. All serious violations that our review team found were acted upon by the Enforcement Section. Complaints are addressed in a very timely fashion, and often the Regional Offices will respond back to a complainant with their findings in a letter very quickly.

One hindrance to the program is that when a follow-up action is taken, often this action is not documented in the file. It is difficult for one to determine whether this violation was properly addressed or what steps were taken by the source or the State to conclude the issue. Also, any violations that are permit-related often are not found in the enforcement files. It is unclear to the review team if these violations are in the permit files or some other files within the program. This makes it difficult to determine whether the violations have been properly addressed and mitigated by the facility.

MDNR Response

We believe our documentation is adequate, but we will endeavor to instruct our staff in proper documentation techniques. The problem may not be failure to document, but rather an inadequate filing system. There is not file security, so files may be easily misplaced. This situation will improve greatly when all files are moved to the file room.

Data and File Management

MDNR utilizes several in-house data management systems, as well as the national AIRS Facility Subsystem (AFS). MDNR receives compliance information from their regional and local agencies' offices; and is responsible for the data entry into AFS. Enforcement data is tracked in the state in-house data tracking systems very well. This data could easily be transferred into AFS via a batch process.

MDNR currently updates compliance information into AFS directly, however these normal updates consists of state inspections and state NOV information only. This results in MDNR's failure to meet the compliance national minimum data requirement guidelines (see Appendix 4). EPA has been entering data on behalf of MDNR for HPVs. This may include settlement agreements, NOVs, state inspections, and occasionally adding new sources to AFS. EPA must rely on the hard copy information provided by the enforcement section for this data. EPA will terminate this practice in the future, which will reflect poorly on MDNR's lack of enforcement data in national reporting. MDNR has indicated an intention to increase the amount of enforcement data into AFS, but these steps have not been taken as of the date of the Program Review.

MDNR Response

We will enter HPV data and non-HPV data beginning October 1. The Enforcement and Administrative sections of APCP will work together to ensure the completeness of this data.

Also, our review discovered that actions that are not associated or attached to inspection reports are not being entered into AFS. The compliance status is not changed in AFS when a facility leaves or returns to compliance.

MDNR Response

Enforcement will need to coordinate with the Administrative Section to address these issues. We will develop a procedure to route the information to the Administrative Section for entry into AFS.

Overall Assessment of Air Enforcement Program

Overall, the Missouri air enforcement program is working quite well. MDNR has a strong air enforcement program that works well with the existing procedures in place. MDNR does not hesitate to take enforcement actions when warranted, and the central and the regional offices work well together.

Section V

RECOMMENDATIONS

- Improve and enhance the inspection report forms. These forms do not contain the necessary information to determine whether all applicable requirements are being evaluated by the inspector. We recommend that the forms be modified to include greater detail of specific permitting and compliance requirements for each source.

MDNR Response

Acceptable as per previous comment on page 94.

- Improve follow-up documentation in the files. Once an enforcement action has been taken against a facility, the file should contain the evidence of the mitigation action so that any compliance officer can be assured that the violation has been addressed and closed-out.

MDNR Response

Acceptable as per previous comment on page 95.

- Input complete data to AFS. All data necessary to meet the compliance national minimum data requirement guidelines, including HPV information, and follow-up compliance information, needs to be submitted directly by MDNR to AFS.

MDNR Response

The Enforcement Section does not input data into AFS. The Enforcement Section will work with the Administrative Section on this issue.

APPENDIX

Entrance Interview Questions

File Review Checklist

Program Review File List

AFS Compliance Minimum Data Requirements

Entrance Interview Questions

Goals of Audit

1. Assure that violations at major sources are being identified by the State.

2. Assure that significant violators are being reported to EPA.

3. Assure that Timely and Appropriate enforcement actions are being implemented by MDNR.

Entrance Interview Questions

Describe MDNR structure related to clean air act personnel including the location of inspectors, compliance officers, permit writers, attorneys, stack test observers, air planning personnel, ambient monitoring personnel.

Identify, for the previous twelve months, the number of inspections conducted, the number of stack tests observed, the number of construction permits issued, the number of NOVs issued, the number of enforcement actions taken, the penalties assessed and penalties collected.

Describe the APCP filing system. Describe the files available to inspectors.

Describe how sources are selected and scheduled for inspections.

Identify who receives a copy of inspection reports.

Describe how inspections reports are transmitted to compliance officers.

Describe how citizen complaints are handled.

Describe how the enforcement program receives information concerning potential violations from the permit, ambient monitoring, Title V, and planning programs.

Describe other mechanisms through which violations may be found (e.g. self reporting, CEM reports, stack test reports, Title V certifications, MACT exceedance reports, etc.). Describe how these mechanisms are received and reviewed by APCP.

Describe how potential violations are identified and by whom.

Describe the legal process for addressing violations and the timeline associated with this process.

Identify the various enforcement mechanisms available to APCP (e.g. NOVs, Orders, Settlement Agreements, Consent Decrees, etc)

Identify who drafts and who signs the various enforcement actions.

Describe how penalties are set.

Describe the relationship between APCP, AG, and MACC.

Identify the various data systems utilized by APCP and the data entered into each.

Describe what violations are reported to EPA. Describe the documentation submitted to EPA in reporting these violations.

Describe the oversight of local agencies.

Missouri File Review Checklist

Reviewer:_____ Date:_____

Facility File Reviewed:
Name:_____
Address:_____
AIRS ID:_____

Violation Found: Yes_____ No_____

Inspection Reports

13. Are the applicable regulations listed in the inspection report (which includes any permit limitations)?

14. Were excess opacity readings documented? If yes, describe, including any follow-up action taken.

15. Did the report document any other violations found during the inspection? (e.g. constructing without a permit, failure to meet permit conditions). Include any follow-up action taken.

Self Reporting/Excess Emission Reports

16. For Excess Emission Reports (EERs), did the total CEM/COM excess emission exceed 5% of the relevant time covered by the reporting period? Describe. What follow-up action was taken?

17. Did the file contain other self reporting submittals documenting exceedance for a restriction for which the submittal is required, e.g. MACT semi-annual reports? Describe. What follow-up action was taken?

Performance Tests, Citizen Complaints, Others

18. Did the file contain a performance test documenting the source’s failure to comply with a regulatory limitation? Describe. What follow-up action was taken?

19. Did the file contain evidence of a violation as a result of responding to a citizen complaint? Describe. What follow-up action was taken?

20. Was there any other evidence or documentation of a violation in the file? Describe. What follow-up action was taken?

Missouri Program Review File List

AIRS ID	Source Name
031-00031	Lee-Rowan Co.
023-00038	Briggs & Stratton
143-00053	E.B.Gee Grain Terminal
215-00003	Thomason Charcoal Company
186-00001	Mississippi Lime
187-00048	Huffy Bicycle
051-00003	Maytag Corp.
159-00005	Rival Manufacturing Co.
131-00006	Lake Ozark Construction
161-00006	University of Missouri - Rolla Power Plant
019-00011	Harry S. Truman Memorial
027-00019	ABB Power T & D
145-00044	Sabreliner Corp.
209-00007	Table Rock Asphalt
213-00007	Royal Oak Charcoal
217-00034	Missouri Public Service
097-00020	Eagle-Picher Industries
105-00045	Lee Company
047-00031	Northland Ready Mix
013-00016	MFA Exchange - Butler
021-00004	St. Joseph Light & Power - Lake Road Plant
147-00005	Northwest Missouri State University
061-00014	Farmer’s Stone - Trager
101-00032	Essex Waste Management
121-00004	Macon Municipal Utilities
117-00022	Reeds Seed
001-00003	Truman State University
111-00006	Bunge Corporation
007-00013	MFA Fertilizer Plant
195-00009	Tyson Foods Inc.
183-00130	Blastco Inc.
183-00076	General Motors-Wentzville
113-00042	Farmers Elevator & Supply
219-00001	Charleswood Furniture Corp.
071-00145	Fred Weber Inc.
099-00014	Dow Chemical

Chapter VI

ASBESTOS

TABLE OF CONTENTS

Section I

INTRODUCTION

The asbestos review was conducted on-site with EPA staff interviewing asbestos program staff and conducting file reviews. A few weeks prior to the program review visit a questionnaire (see Appendix) was provided the MDNR asbestos program manager so the asbestos staff would be familiar with the information EPA would be asking about during the interview phase of the visit. The information gathered during the program review pertained to the areas of program operation, data management, and file review.

Section II

PROGRAM OPERATION

Non-notifiers

MDNR identifies non-notifiers in several ways. The most frequent method occurs when someone lodges a complaint with the APCP. Field investigators are dispatched to the site and conduct a field interview and investigation. The APCP receives three to four complaints per month. The majority of these complaints are referred to the appropriate MDNR Regional Office or local program. The APCP follows up on complaints referred to MDNR regional offices; however, follow-up with local programs is complicated by the absence of direct line authority. The APCP endeavors to ensure that all complaints are investigated.

Also, during routine field trips, APCP investigators may observe an activity (demolition, renovation or regular construction-related activities) at an unexpected location. Further investigation may uncover an ongoing asbestos project or demolition that was not properly notified.

The APCP encourages “courtesy” notifications for projects below the NESHAP thresholds. When time permits, investigators may visit non-regulated sites to ensure the quantities of asbestos-containing material (ACM) were assessed correctly and are under the NESHAP thresholds.

Enforcement Response Policy

The APCP does not have a set penalty policy. Missouri Rule 10 CSR 10-6.230 does include a gravity-based penalty assessment matrix which applies generally to any enforcement actions pursued by the APCP. EPA recommends that the APCP develop an asbestos demolition/renovation penalty policy. Such a policy would benefit the regulated community and would minimize the perception that penalties are established arbitrarily.

MDNR Response

We do not believe a formal penalty is necessary. Our penalties are consistent and fair. As noted in EPA comments, 10 CSR 10-6.230 includes a gravity-based assessment matrix with a potential range of penalty amounts.

MDNR does not have a written policy governing the issuance of timely and appropriate enforcement actions. However, APCP management and the Missouri Air Conservation Commission do keep track of staff progress on case review and enforcement.

Civil Penalty Authority

Authority to assess civil penalties is contained in the Revised Statutes of Missouri (RSMo), Section 643.151, "Violations, Penalties, Notice – Civil Action – Offer of Settlement, Method – Disclosure of Confidential Information, Penalty." The maximum penalty assessment "… cannot exceed $10,000 for each violation per day for each day, or part thereof, the violation continues to occur."

Other Enforcement Remedies

In accord with 10 CSR 10-6.230, conference, conciliation and persuasion (CC & P) is a process (either written, verbal, or a combination of both) used continuously by the APCP staff toward alleged violators to resolve the alleged violation and develop a compliance plan. Other enforcement remedies utilized during CC&P includes: (1) suspension of all (or part of) a proposed penalty amount; (2) site remediation by the alleged violator; (3) requiring the alleged violator to attend specific training in order to obtain state asbestos certification; and, (4) in the case of improper burial of ACM, obtaining a deed restriction that becomes an attachment to the property deed.

NESHAP Category I nonfriable floor covering

The APCP agrees with EPA policy with regard to the removal of Category 1 nonfriable floor covering. If the material is in good condition and proper care is taken during the removal process, the removal is not considered a regulated project. The APCP has developed an informational handout dealing specifically with removal of nonfriable asbestos-containing materials, e.g., flooring, roofing, and siding materials.

Policy Determinations

The APCP maintains a copy of the EPA Applicability Determination Index. For the most current information, the APCP utilizes EPA's OECA Homepage available on the Internet. The APCP also maintains a policy notebook with sections dedicated to each of the program's units, e.g., permitting, enforcement, and planning. The APCP asbestos unit also maintains a policy folder specifically for asbestos-related issues.

Section III

DATA MANAGEMENT

Case tracking

Field inspectors complete an inspection report for each NESHAP inspection conducted. Included with the report, is an invoice which assigns a specific invoice number to each inspection. These invoice numbers are entered in the database along with the project information contained in the notification.

In instances where violations are written, the inspector's report, a copy of the NOV and a copy of the inspection report become integral parts of the case file. Any correspondence and/or phone conversations with the alleged violator also become part of the case file. After a settlement is reached, the Attorney General's Office (AGO) is notified and provided a copy of the case file. The AGO drafts and distributes the formal agreement, which is ultimately signed by all parties involved. After all signatures are completed, a copy of the fully executed agreement is returned to Enforcement for inclusion in the case file.

Data system

Asbestos-related information (project notifications, demolition notifications, contractor registration, individual

certifications, etc.) are entered in a Paradox database program. The current system is not compatible with either the regional offices or with the EPA National Asbestos Registry System (NARS). EPA has worked with MDNR to develop a NARS-compatible data system, but, to date, no discernable progress has been made. EPA recommends that a NARS-compatible asbestos data system be developed and implemented.

MDNR Response

We will continue to work toward this end, but given the low priority of asbestos in Region VII, we lack justification to elevate its priority level. As to the existing database, we have not yet seen a need to purge it, since the database is sufficiently robust to retain all past certification and registration data.

Data on individual certifications and contractor registrations has not been purged since MDNR's asbestos programs were granted EPA approval (1994). The database also contains asbestos project information for the last three years. Older project data is transferred to floppy disks and retained indefinitely.

Section IV

FILE REVIEW

Background

As a result of a court decision, Missouri's asbestos demo/reno rule was declared invalid on February 3, 1998, and the APCP could no longer enforce it. Moreover, the APCP could only enforce the federal asbestos NESHAP as it existed on July 1, 1988. Thus, the APCP could not enforce the most recent revisions to the NESHAP (promulgated on November 20, 1990).

Effective November 1, 1999, the state's asbestos NESHAP authority was updated to adopt EPA's 1990 revisions.

Although the state could have enforced the pre-1990 NESHAP between February 3,1998, and October 30, 1999, there was considerable confusion and consternation given the legal issues associated with the court decision and MDNR's appeal. As a result, staff was discouraged from seeking penalties with asbestos enforcement actions. However, during this time period,

the state referred numerous NESHAP cases to EPA for Federal enforcement action.

Now that the state's NESHAP authority has been updated and the court case has been settled, the APCP has begun to re-invigorate its asbestos enforcement program. During the on-site visit, the reviewer learned that several asbestos enforcement penalty actions were in progress.

Results

The EPA reviewer examined 22 asbestos case files which had been closed recently, i.e., most of the violations had occurred in 1999. (See file review checklists in Appendices to this Chapter.) None of the enforcement actions included civil penalties. The completeness of the documentation in these files varied considerably. For example, of the 22 reports;

10 contained compliance inspection reports;
7 contained documentation as to whether the NESHAP threshold was met;
14 documented whether ACM was present (results of analysis);
9 contained photographs of the demo/reno site;
4 documented whether the ACM was friable;
2 contained a chronology of events.

EPA recommends that enforcement case file documentation be improved to fully support any enforcement action which might be taken, and any challenges which might result.

EPA Response

We believe our documentation is adequate, but we will strive to improve.

The Kirksville Osteopathic College case was of particular concern. In this case, the amount of Category II ACM siding was documented to be above the NESHAP threshold (160 square feet). The removal work practices had caused the ACM to become friable. In this instance, there was a substantive violation of the NESHAP emission control requirements and a potential threat to human health. MDNR closed the case because a registered asbestos contractor was hired and promptly cleaned up the friable ACM debris. EPA believes that a civil penalty action would have been

appropriate given the gravity of the violation and the potential health risk.

The reviewer noticed that considerable staff effort is expended in enforcing MDNR's asbestos certification program which pertains to workers, inspectors, supervisors, air sampling professionals, management planners, and project designers. While this activity is beyond the scope of our review, EPA nonetheless commends MDNR for its effort. The state's certification program helps to ensure a properly trained and qualified work force and goes a long way toward minimizing the potential adverse health impacts of asbestos exposure.

EPA would like to recognize the efforts of Mr. Paul Jeffery, an inspector at the MDNR Jefferson City Regional Office. In conducting the file review, Mr. Jeffery's efforts to document violations and recommend appropriate enforcement actions were apparent in numerous instances.

MDNR Response

The APCP agrees with the EPA comments concerning Mr. Jeffery.

Section V

RECOMMENDATIONS

- Develop an asbestos demolition/renovation penalty policy.

MDNR Response

Do not agree as per previous comment on page 108.

- Develop and implement a NARS-compatible asbestos data system.

MDNR Response

Partially agree as per previous comment on page 110. Any funding and technical support Region VII might be able to provide would be very helpful in accomplishing this goal.

- Ensure adequate enforcement case file documentation to fully support any potential enforcement actions, and any challenges which might result.

MDNR Response

Agree as per previous comment on page 111.

APPENDIX - Asbestos

Program Review Criteria

File Review Checklists

Chapter VII

MONITORING

TABLE OF CONTENTS

Section I

INTRODUCTION

The MDNR is responsible for conducting the ambient air monitoring program throughout the state of Missouri. This program includes a State and Local Air Monitoring Station (SLAMS) network of air monitors for carbon monoxide (CO), lead (Pb), ozone (O_3), particulate matter-10 micron (PM_{10}), particulate matter-2.5 micron ($PM_{2.5}$) and sulfur dioxide (SO_2). This network is designed to meet the EPA siting regulations and is reviewed annually.

All of the monitors and the laboratory analytical procedures being utilized in this SLAMS network are EPA designated reference or equivalent methods. The standard materials used to calibrate and audit the monitoring systems are properly certified and have the required certification to NIST reference standards.

The agency's standard operating procedures (SOP's) are in good order and well written. MDNR’s data completeness has historically been good for all pollutants monitored as have been the precision and accuracy (P&A) results for their monitoring.

Section II

AUDIT

An Air Monitoring System Audit of the MDNR was conducted on November 16 and 17, 1999. The purpose of the audit was to document the agency's compliance with the EPA ambient air monitoring regulations. The audit information was obtained from on-site monitor performance audits, agency staff interviews, a review of the most recent year of data in the EPA Aerometric Information and Retrieval System (AIRS), and the agency's performance in the National Performance Audit Program. A copy of the Air Monitoring System Audit Questionnaire is included in the Appendix.

The participants in this audit were:

Name	Agency	Name	Agency
Jim Long	MDNR	Cheryl Hickman	MDNR
Celeste Koon	MDNR	Ron Stockett	MDNR
Terry Rowles	MDNR	Orel Baker	SPFLD

Jim Beers	MDNR	Carl Barke	SPFLD
Bern Johnson	MDNR	Tom Wiese	SL City
Rick Taylor	MDNR	Larry Eilbott	SL County
Don Gourley	MDNR	Romero Geroche	KCMO
Jim Brunert	MDNR	Huy Tran	KCMO
Robert Nilges	MDNR	Charles Kennedy	KCMO
Assem Abdul	MDNR	Leland Grooms	EPA
Rayna Broadway	MDNR	Mike Davis	EPA
Dennis Scroeder	MDNR	Thien Bui	EPA
Kevin Thoenen	MDNR	James Regehr	EPA

The full cooperation and assistance of these individuals is acknowledged and greatly appreciated.

One-fourth of the agency's monitoring sites were visited. Half of these sites were chosen using National Performance Audit Program results, Data Completeness Report and PARS Report. The other half were randomly chosen. Digital photos of the surrounding area and monitoring stations were recorded at each of the sites. Full site assessments were completed and selected monitor calibrations were audited. The following is a list of the audited monitors and the monitor audit results:

Site Location	Pollutant	Monit. Audit Results
Charleston/Springfield	O_3	Excellent
Charleston/Springfield	SO_2	Excellent
Mark Twain State Park	SO_2	Excellent
Mark Twain State Park	$PM_{10(P)}$	Satisfactory
Mark Twain State Park	$PM_{10(C)}$	Satisfactory
Mark Twain State Park	Met.Equip	M Satisfactory
Mark Twain State Park	$PM_{2.5}$	Satisfactory
Eldorado Springs	NO_2	Satisfactory
Eldorado Springs	$PM_{2.5}$	Satisfactory
Liberty	NO_2	Excellent
Liberty	Met.Equip	Satisfactory
Liberty	$O_{3(P)}$	Excellent
Liberty	$O_{3(C)}$	Excellent
St. Joseph Pump Station	$PM_{10(P)}$	Satisfactory
St. Joseph Pump Station	$PM_{10(C)}$	Satisfactory
St. Joseph Levee	SO_2	Satisfactory
St. Joseph Levee	Met.Equip	Satisfactory
St. Joseph Museum	$PM_{2.5(P)}$	M Satisfactory
St. Joseph Museum	$PM_{2.5(C)}$	M Satisfactory
Schuylkill West	TSP/Lead	Satisfactory
Watkins Mills	$O_{3(P)}$	Excellent

Watkins Mills	$O_{3(S)}$	Excellent
KCMO Troost	SO_2	Satisfactory
KCMO Locust	PM_{10}	Satisfactory
KCMO Locust	$PM_{2.5(P)}$	Satisfactory
KCMO Locust	$PM_{2.5(C)}$	Satisfactory
KCMO Locust	$TSP/Pb_{(P)}$	Satisfactory
KCMO Locust	$TSP/Pb_{(C)}$	Satisfactory
KCMO Soho	CO	Excellent
KCMO WOF	SO_2	Satisfactory
KCMO WOF	NO_2	Satisfactory
KCMO RG	$O_{3(P)}$	Excellent
KCMO RG	$O_{3(S)}$	Excellent
St. Louis City Tucker	NO_2	Satisfactory
St. Louis City Tucker	SO_2	Satisfactory
St. Louis City Tucker	$O_{3(P)}$	Excellent
St. Louis City Tucker	$O_{3(S)}$	Satisfactory
St. Louis City Margaretta	$PM_{2.5}$	Satisfactory
St. Louis Co. FloValley	$PM_{2.5}$	Satisfactory
St. Louis Co. FloValley	CO	Excellent

$*_{(P)}$ indicates primary monitors
$*_{(C)}$ indicates collocated monitors
$*_{(S)}$ indicates secondary monitors

The results of the monitor audits were all satisfactory or better, with the exception of the $PM_{2.5}$ monitors at St. Joseph Museum, which were marginally satisfactory. The regularly scheduled state flow checks performed following the EPA audits indicated that the $PM_{2.5}$ monitors were back within the 4% audit range. Copies of the actual monitor audits are included in the Appendix.

The site assessments were done as per EPA System Audit Guidance and compared each site to the siting criteria found in CFR Part 58, Appendix E. The results of these site assessments was discussed at length during the system audit. MDNR agreed to make all possible improvements and corrections identified by the site assessments with the help and guidance of EPA, Region 7 air monitoring staff. The assessments for each site can be found in the Appendix.

Section III

AUDIT RESULTS

The technical systems audit focused on the following five areas:

- Network Management
- Field Operations
- Laboratory Operations
- Data and Data Management
- Quality Assurance/Quality Control

These areas were thoroughly reviewed onsite and through the technical systems audit form questionnaire. EPA Region 7 found no major deficiencies in any of these areas.

The current ambient air monitoring network in the state of Missouri(including local agencies) includes: eleven CO, twenty-three Pb, twenty-one O_3, twenty-six PM_{10}, twenty-eight $PM_{2.5,}$ and twenty-six SO_2. A listing of these sites is attached as Appendix D. It is reviewed annually to determine if monitoring locations need to be relocated, added or deleted. These monitors are adequately maintained during one visit every two weeks to each monitoring location.

All of the monitors and laboratory procedures used in the MDNR network have been designated by EPA as approved reference or equivalent methods for ambient air criteria pollutants. Each of the standard materials used to calibrate or audit these monitors or procedures are properly certified. When required, the standard certifications are traceable to NIST reference standards.

MDNR has participated, as required, in EPA's national monitor performance audit program conducting audits of each type of pollutant monitor they operate. Within the past two years the results of these audits have been satisfactory. As shown above, Region 7 conducted several monitor performance audits as part of this program audit. At least one analyzer for each pollutant monitored by MDNR was audited by Region 7 . The calibration of each audited monitor was satisfactory. Also, the agency's internal monitor performance auditing has been done according to the EPA required schedule. In 1998, the results of these audits were satisfactory.

The completeness of valid data from the MDNR's ambient monitoring network historically has been very good. The quarterly reports of this data to EPA has also been timely. This good record of data completeness continued in 1998, every monitor in the network had more than 75% complete data for each quarter.

Section IV

COMMENDATIONS AND RECOMMENDATIONS

Commendations

- The Missouri Department of Natural Resources, Environmental Services Program (MDNR/ESP) staff are exceptionally well trained and cognizant of field sampling, data processing, and quality assurance protocols. All field and laboratory documentation reviewed were well maintained and easily recoverable by MDNR staff.

- MDNR/ESP has established multiple fail-safe systems to protect the integrity of the ozone monitoring data.
- All monitoring sites that were visited were maintained in good condition and contained all necessary log books and information onsite.

- MDNR continues to monitor, collect, and report five minute average SO_2 data even though no NAAQS exists.

- MDNR/ESP uses an innovative approach to quality assurance of their $PM_{2.5}$ monitoring data by remote verification of site cooperator performance and electronic data review/download through direct modem link to their in-field $PM_{2.5}$ equipment.

- MDNR/ESP maintains independent quality assurance capacity through their Air Quality Assurance Unit (AQAU). The AQAU is unique in its ability to effectively coordinate and perform a large range of monitoring quality assurance functions across multiple state and local program boundaries.

Recommendations

- Review of Precision / Span / Zero (PSZ) documentation produced by MDNR/ESP monitoring staff do not indicate performance of a follow-on verification with either zero or span gas after monitoring instrument adjustments. Zero and span adjustments must always be followed by a calibration after sufficient time has been allowed for the analyzer to fully stabilize. (Reference: *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1, Ambient Air Quality Monitoring Program Quality System Development,* EPA-454-/R-98-004, August 1998, Section 12.5).

- The Bios flow calibrators used by Kansas City, MO air program and the St. Louis Air Pollution program should be sent in for annual recertification.

- Ensure hourly temperature logs are maintained at all monitoring sites.

- Meteorological equipment should be calibrated on a semi-annual basis.

- MDNR/ESP/AQAU maintains excellent procedures for establishing an ambient analyzer's reporting status based upon in-field audits. Currently, no corrective action is recommended if an audited analyzer is within ± 15% deviation from any audit point. In many cases ± 15% deviation will cause monitoring data to be invalidated. Recommend adoption of tighter control criteria to avoid field data loss due to invalidation. A convenient way to accomplish this would be to require corrective action of any audited monitor receiving a "poor" AQA audit rating in accordance with Section 8.6 of *"Standard Operating Procedures Manual for Environmental Auditing of ambient Air Monitoring Systems",* MDNR/ESP/AQAU internal SOP.

- Work closely with EPA Region 7 and local agency staff to address siting criteria concerns contained as Appendix B.

MDNR Response

Please see comments attached to response letter.

APPENDIX - Monitoring

National Air Monitoring System Audit Questionnaire

Monitor Audit Results

MDNR Site Assessments

Ambient Air Monitoring Network